

BLACK HILLS POWER, INC.
SD PUC DOCKET: EL14-061

REQUEST DATE : August 21, 2014

RESPONSE DATE : October 3, 2014

REQUESTING PARTY: SDPUC Staff

SDPUC Request No. 5:

The maps included in Appendix A are low resolution and difficult to read. Please provide each map at a scale and resolution similar to those provided by the Applicant in Docket EL13-028. (Exhibit 2 to the Application is a good example - <http://puc.sd.gov/commission/dockets/electric/2013/EL13-028/exhibit2.pdf>).

Response to SDPUC Request No. 5:

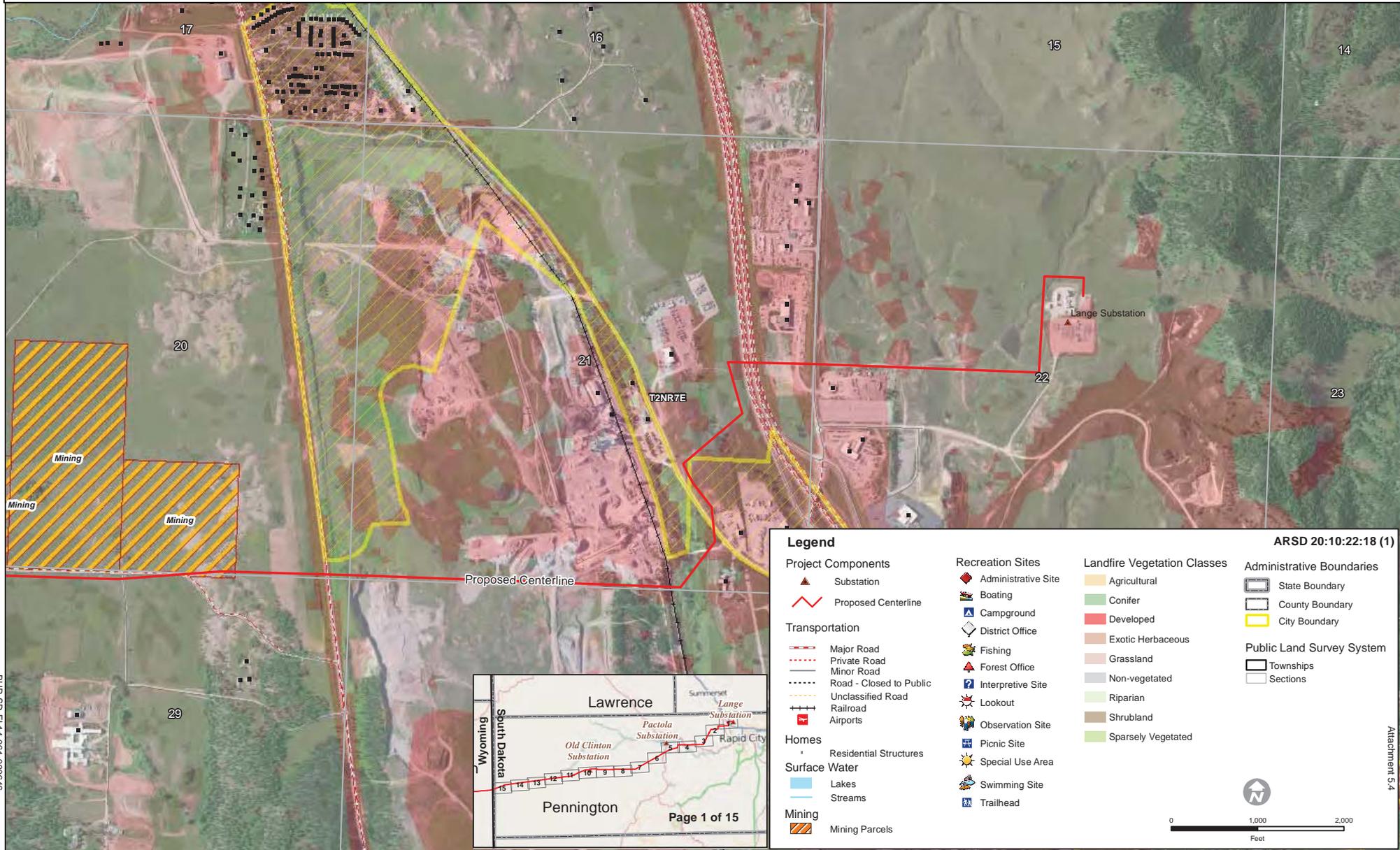
Please see Attachments 5.1, 5.2, 6.1, 6.2, 8.1, 8.2, 13, and 18 for updated maps. Please also see Attachment 5.3 for the map that was shared at the August 25th public input meeting

Supplemental Response to SDPUC Request No. 5:

Black Hills Power revised Attachments 5.1, 6.1, 6.2, 8.1, 8.2, and 13 to reflect the final route. Please see Attachments 5.5, 6.3, 6.4, 8.3, 8.4 and 13.1.

Attachments: Attachment 5.5 – Revised Geologic Map of Central Black Hills
Attachment 6.3 – Revised General Site Location
Attachment 6.4 – Revised Existing Roads
Attachment 8.3 – Revised Geologic Map Units
Attachment 8.4 – Revised Physical Environment
Attachment 13.1 – Revised Surface Water

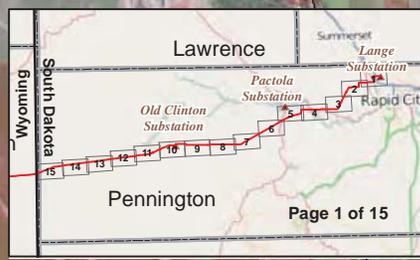
Figure 8 - Existing Land Use 230 kV Transmission Project



Legend ARSD 20:10:22:18 (1)

<p>Project Components</p> <ul style="list-style-type: none"> ▲ Substation — Proposed Centerline <p>Transportation</p> <ul style="list-style-type: none"> — Major Road — Private Road — Minor Road — Road - Closed to Public — Unclassified Road — Railroad ✈ Airports <p>Homes</p> <ul style="list-style-type: none"> ■ Residential Structures <p>Surface Water</p> <ul style="list-style-type: none"> ■ Lakes — Streams <p>Mining</p> <ul style="list-style-type: none"> ▨ Mining Parcels 	<p>Recreation Sites</p> <ul style="list-style-type: none"> ◆ Administrative Site ⛵ Boating ⛺ Campground 🏠 District Office 🎣 Fishing 🌲 Forest Office 📖 Interpretive Site 🔍 Lookout 🌳 Observation Site 🏠 Picnic Site ☀ Special Use Area 🏊 Swimming Site 🚶 Trailhead 	<p>Landfire Vegetation Classes</p> <ul style="list-style-type: none"> ■ Agricultural ■ Conifer ■ Developed ■ Exotic Herbaceous ■ Grassland ■ Non-vegetated ■ Riparian ■ Shrubland ■ Sparsely Vegetated 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> ▭ State Boundary ▭ County Boundary ▭ City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> ▭ Townships ▭ Sections
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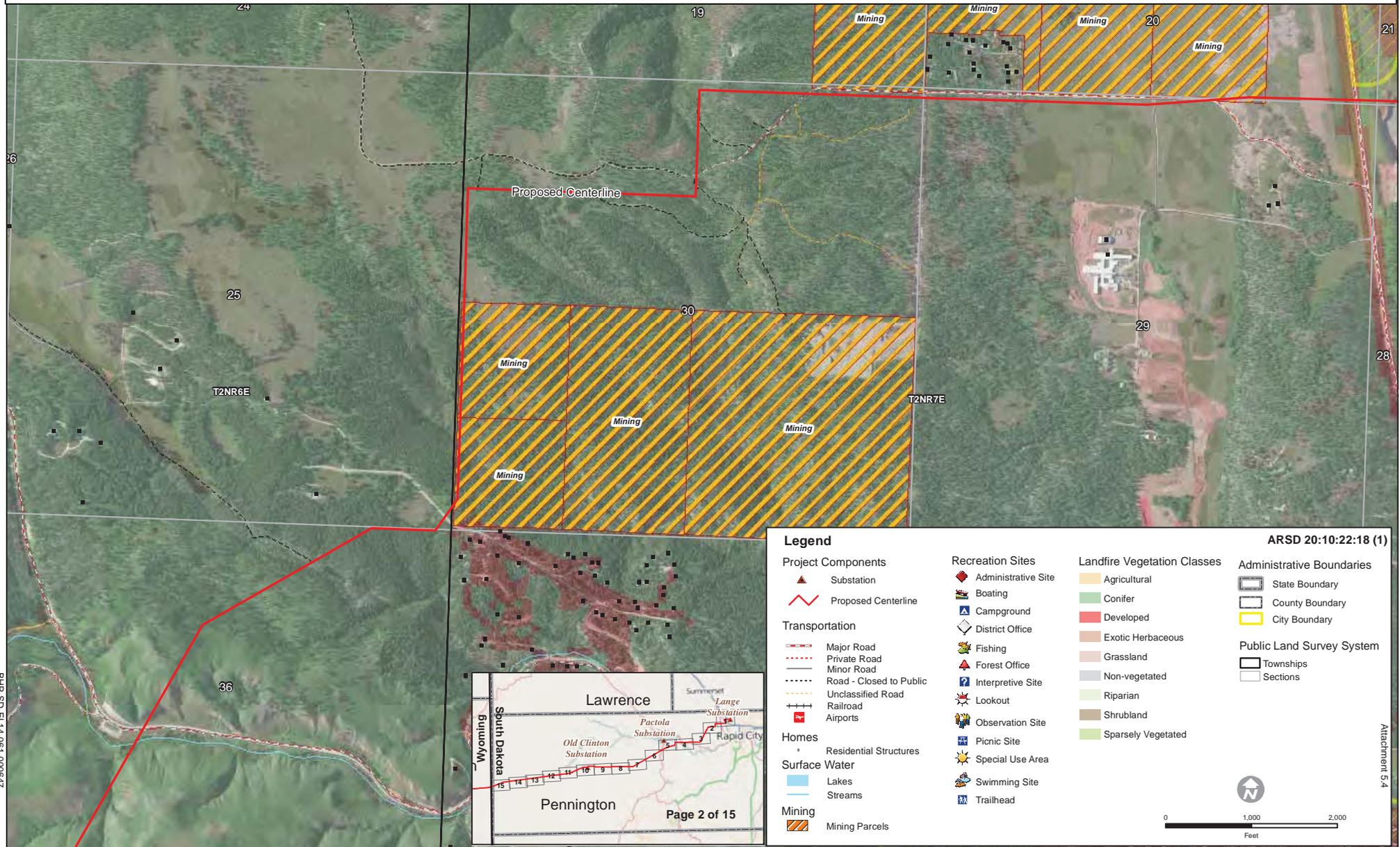
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BHP-SD-EL14-061-000646

Attachment 5.4

Figure 8 - Existing Land Use 230 kV Transmission Project



BHP-SD-EL14-061-000647



Legend

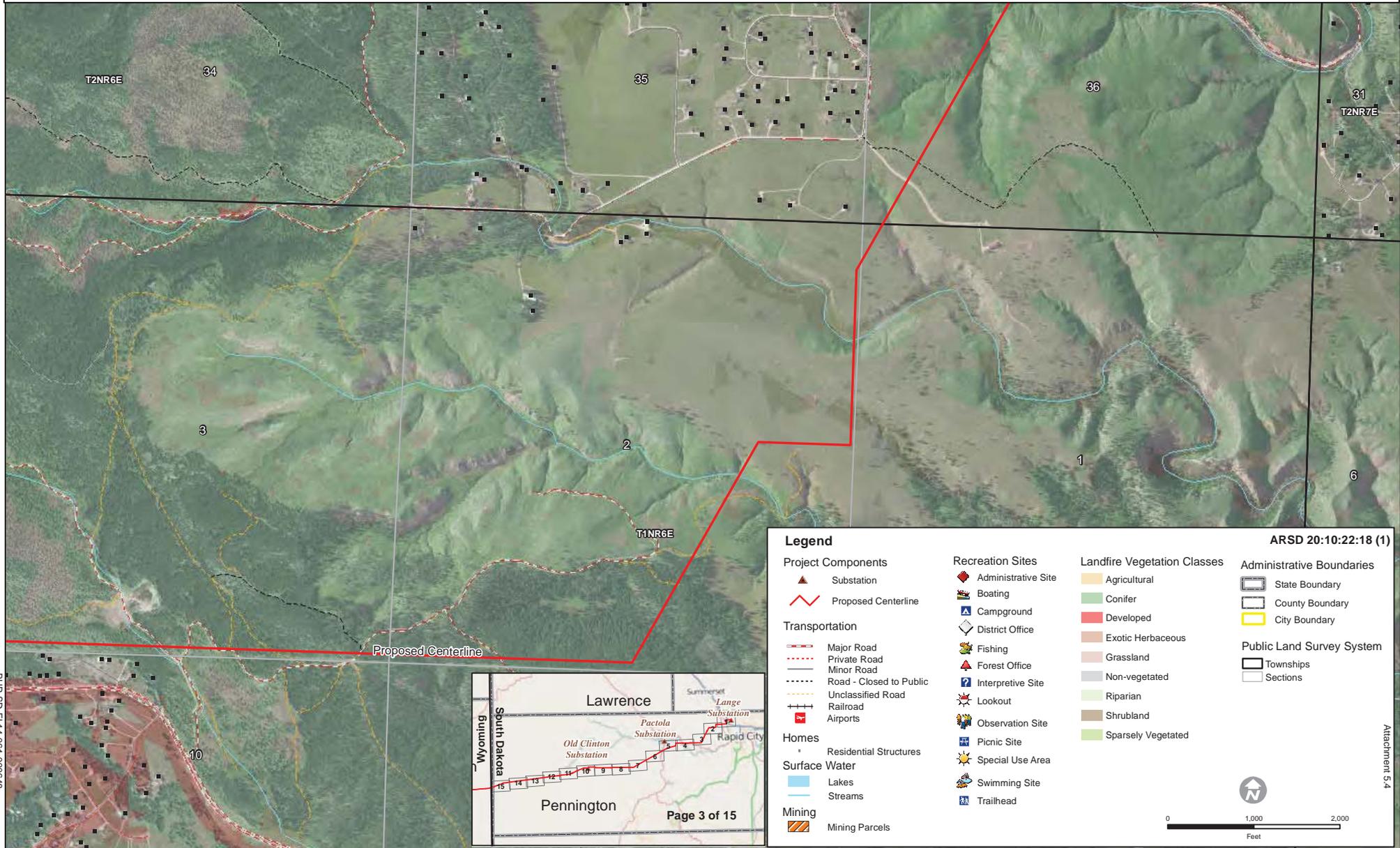
<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Transportation</p> <ul style="list-style-type: none"> Major Road Private Road Minor Road Road - Closed to Public Unclassified Road Railroad Airports <p>Homes</p> <ul style="list-style-type: none"> Residential Structures <p>Surface Water</p> <ul style="list-style-type: none"> Lakes Streams <p>Mining</p> <ul style="list-style-type: none"> Mining Parcels 	<p>Recreation Sites</p> <ul style="list-style-type: none"> Administrative Site Boating Campground District Office Fishing Forest Office Interpretive Site Lookout Observation Site Picnic Site Special Use Area Swimming Site Trailhead 	<p>Landfire Vegetation Classes</p> <ul style="list-style-type: none"> Agricultural Conifer Developed Exotic Herbaceous Grassland Non-vegetated Riparian Shrubland Sparsely Vegetated 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections
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ARSD 20:10:22:18 (1)

Attachment 5.4

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Figure 8 - Existing Land Use 230 kV Transmission Project



BHP-SD-EL14-061-000648

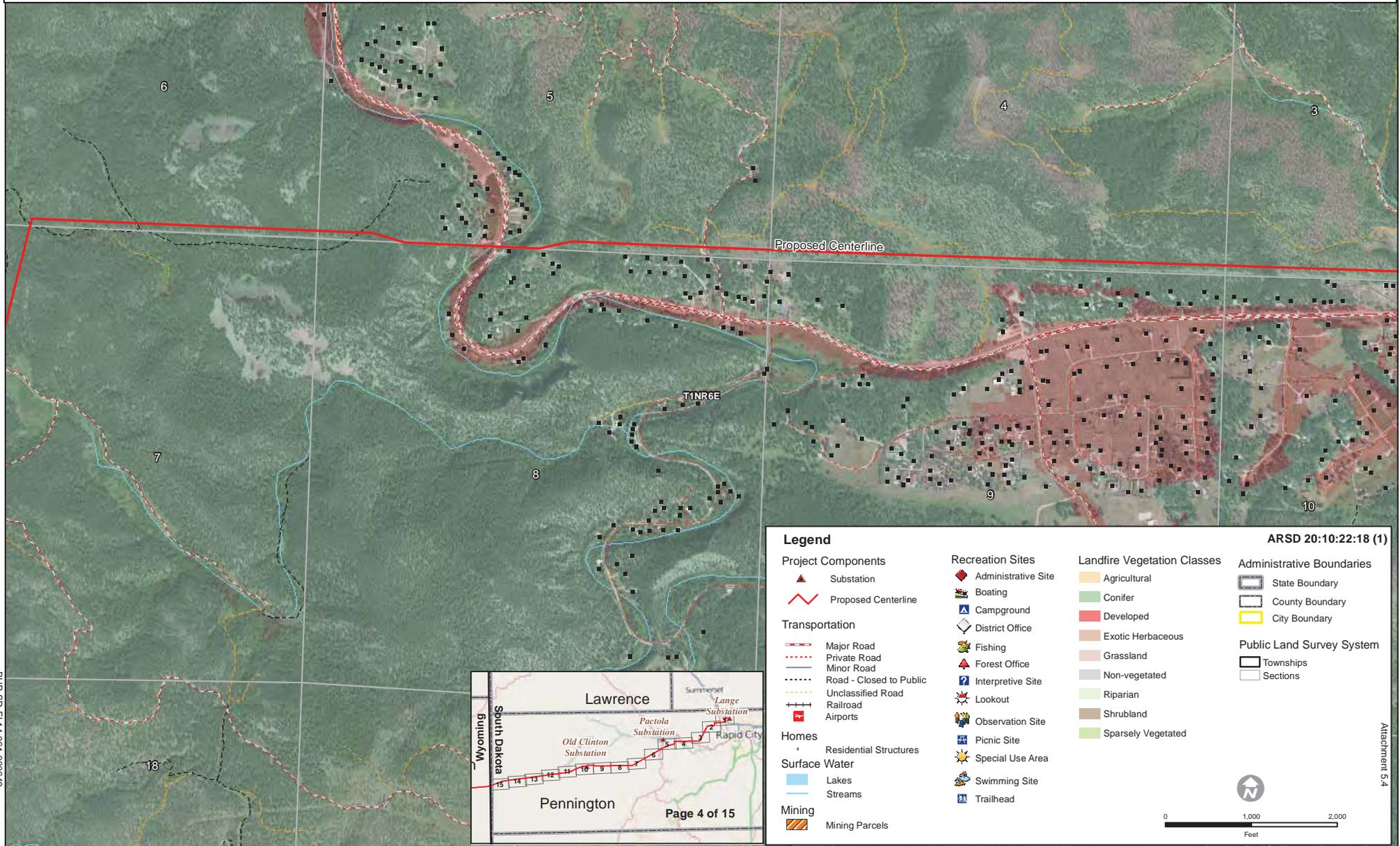


ARSD 20:10:22:18 (1)

<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Transportation</p> <ul style="list-style-type: none"> Major Road Private Road Minor Road Road - Closed to Public Unclassified Road Railroad Airports <p>Homes</p> <ul style="list-style-type: none"> Residential Structures <p>Surface Water</p> <ul style="list-style-type: none"> Lakes Streams <p>Mining</p> <ul style="list-style-type: none"> Mining Parcels 	<p>Recreation Sites</p> <ul style="list-style-type: none"> Administrative Site Boating Campground District Office Fishing Forest Office Interpretive Site Lookout Observation Site Picnic Site Special Use Area Swimming Site Trailhead 	<p>Landfire Vegetation Classes</p> <ul style="list-style-type: none"> Agricultural Conifer Developed Exotic Herbaceous Grassland Non-vegetated Riparian Shrubland Sparsely Vegetated 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections
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Attachment 5.4

Figure 8 - Existing Land Use 230 kV Transmission Project



Legend ARSD 20:10:22:18 (1)

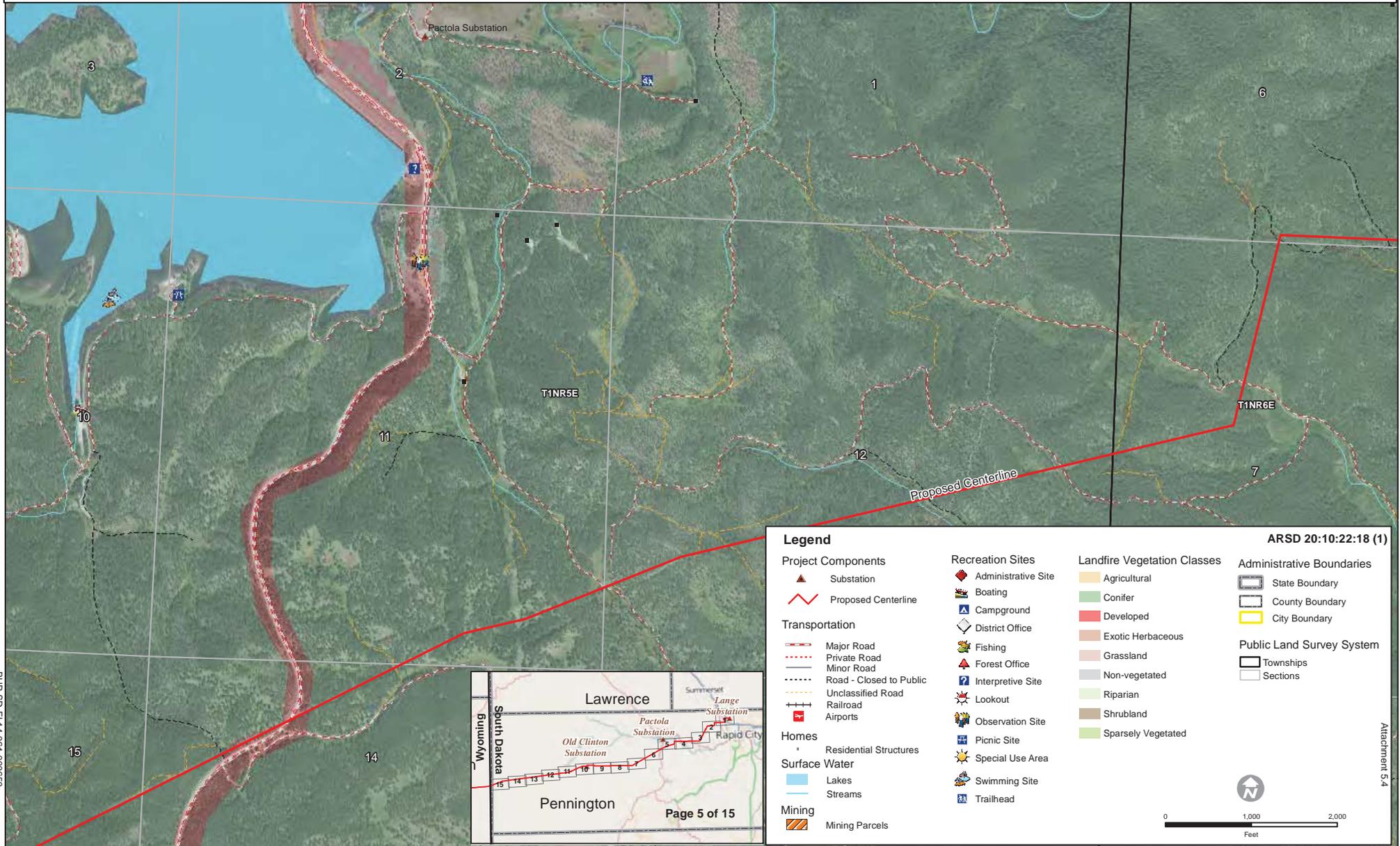
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BHP-SD-EL14-061-000649



Figure 8 - Existing Land Use 230 kV Transmission Project



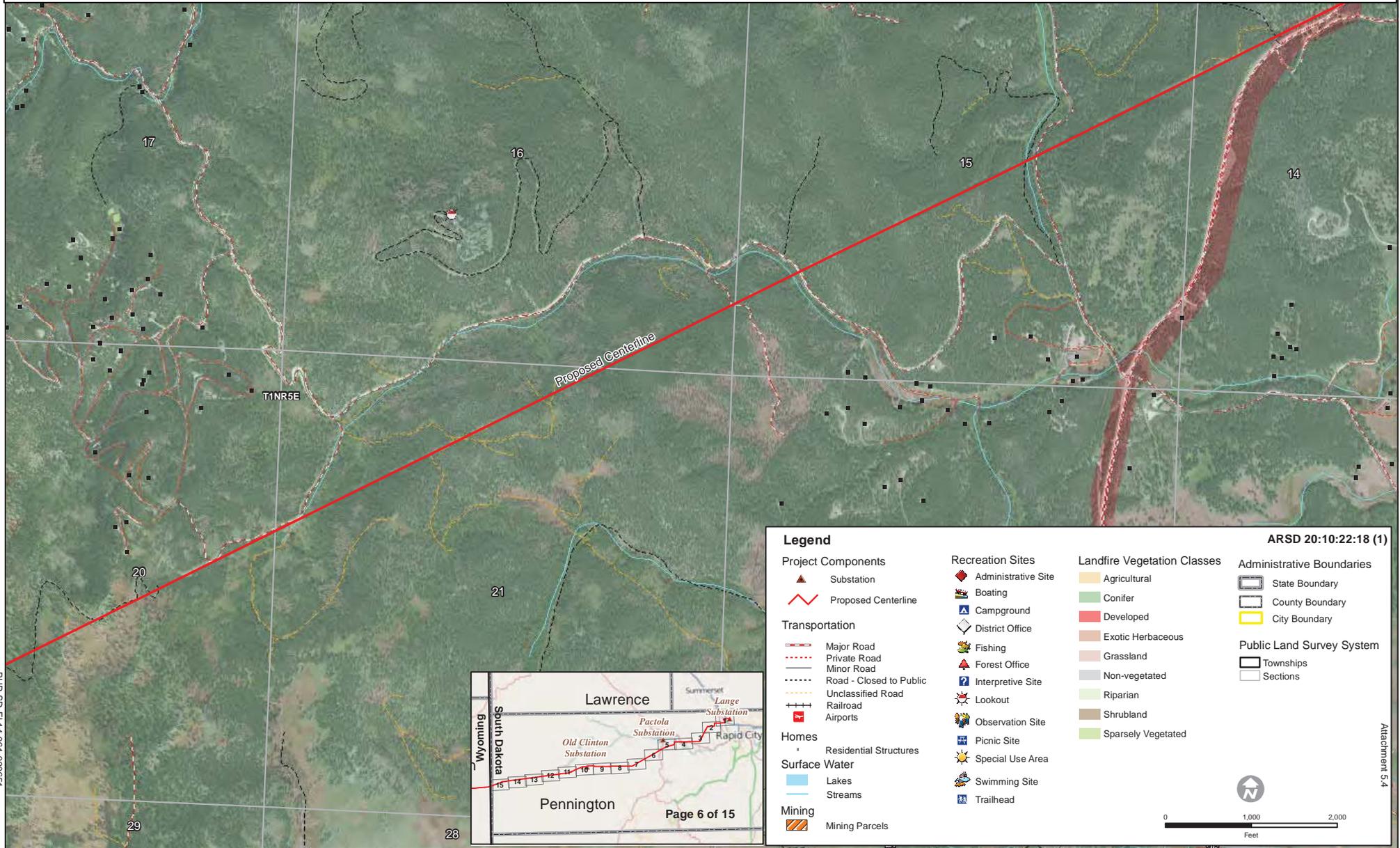
Legend ARSD 20:10:22:18 (1)

<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Transportation</p> <ul style="list-style-type: none"> Major Road Private Road Minor Road Road - Closed to Public Unclassified Road Railroad Airports <p>Homes</p> <ul style="list-style-type: none"> Residential Structures <p>Surface Water</p> <ul style="list-style-type: none"> Lakes Streams <p>Mining</p> <ul style="list-style-type: none"> Mining Parcels 	<p>Recreation Sites</p> <ul style="list-style-type: none"> Administrative Site Boating Campground District Office Fishing Forest Office Interpretive Site Lookout Observation Site Picnic Site Special Use Area Swimming Site Trailhead 	<p>Landfire Vegetation Classes</p> <ul style="list-style-type: none"> Agricultural Conifer Developed Exotic Herbaceous Grassland Non-vegetated Riparian Shrubland Sparsely Vegetated 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections
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BHP-SD-EL14-061-000650

Attachment 5.4



Legend ARSD 20:10:22:18 (1)

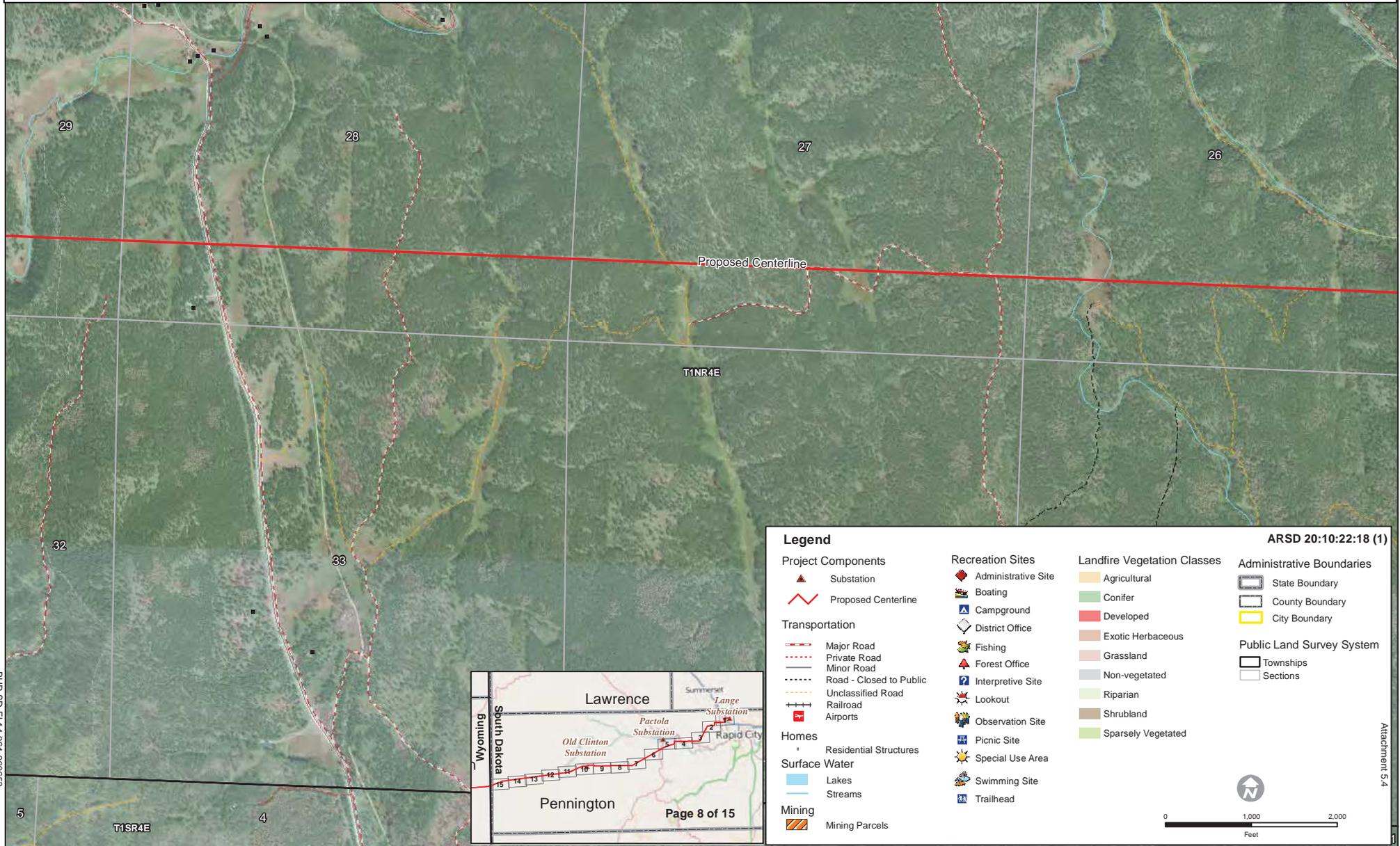
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BHP-SD-EL-14-061-000651

Attachment 5.4

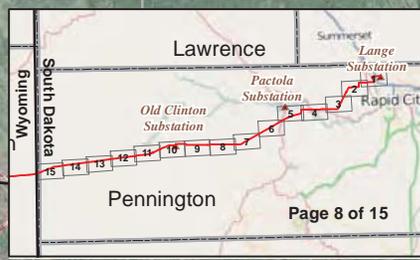
Figure 8 - Existing Land Use 230 kV Transmission Project



Legend ARSD 20:10:22:18 (1)

<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Transportation</p> <ul style="list-style-type: none"> Major Road Private Road Minor Road Road - Closed to Public Unclassified Road Railroad Airports <p>Homes</p> <ul style="list-style-type: none"> Residential Structures <p>Surface Water</p> <ul style="list-style-type: none"> Lakes Streams <p>Mining</p> <ul style="list-style-type: none"> Mining Parcels 	<p>Recreation Sites</p> <ul style="list-style-type: none"> Administrative Site Boating Campground District Office Fishing Forest Office Interpretive Site Lookout Observation Site Picnic Site Special Use Area Swimming Site Trailhead 	<p>Landfire Vegetation Classes</p> <ul style="list-style-type: none"> Agricultural Conifer Developed Exotic Herbaceous Grassland Non-vegetated Riparian Shrubland Sparsely Vegetated 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections
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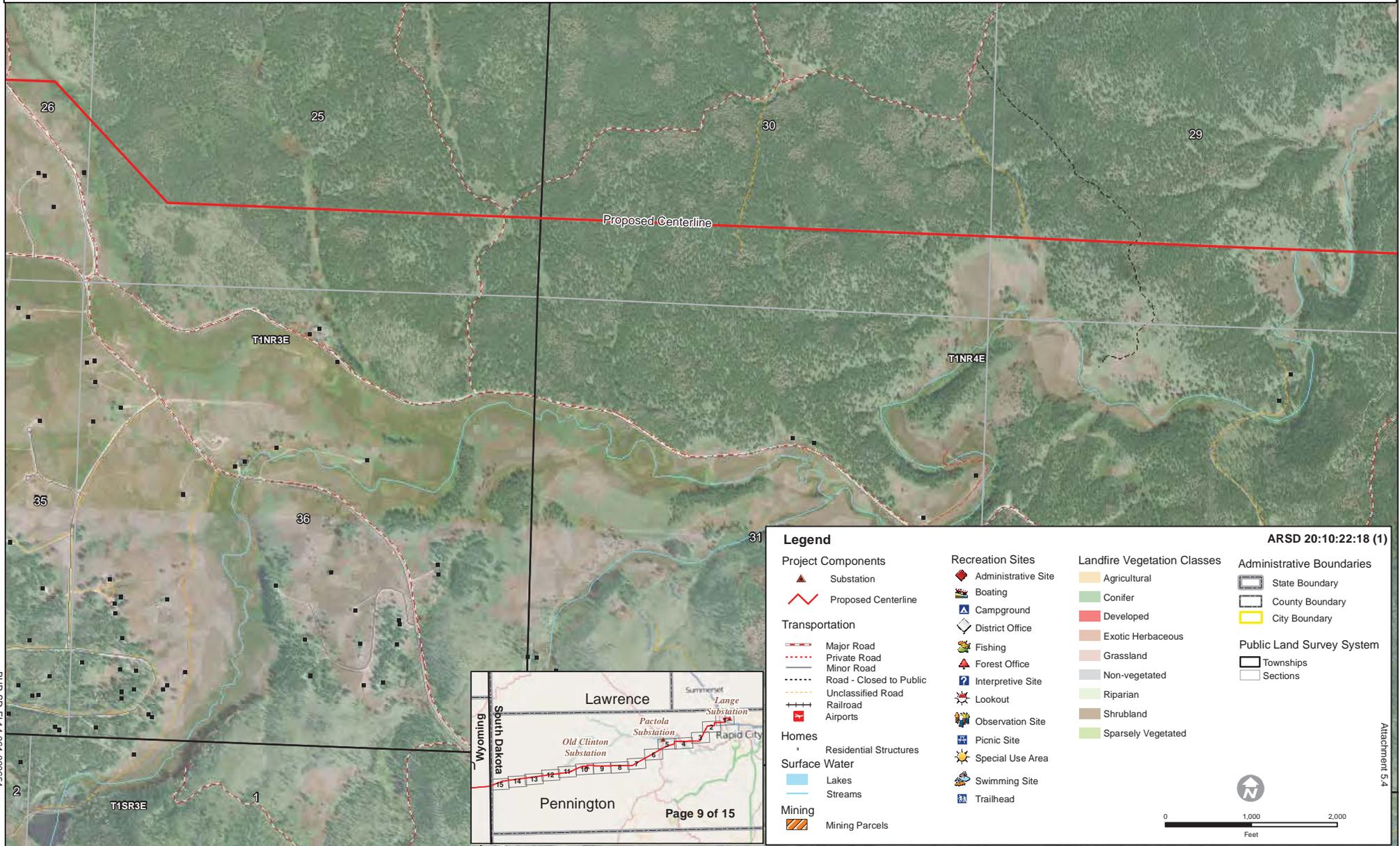
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BHP-SD-EL14-061-000633

Attachment 5.4

Figure 8 - Existing Land Use 230 kV Transmission Project



BHP-SD-EL14-061-000654



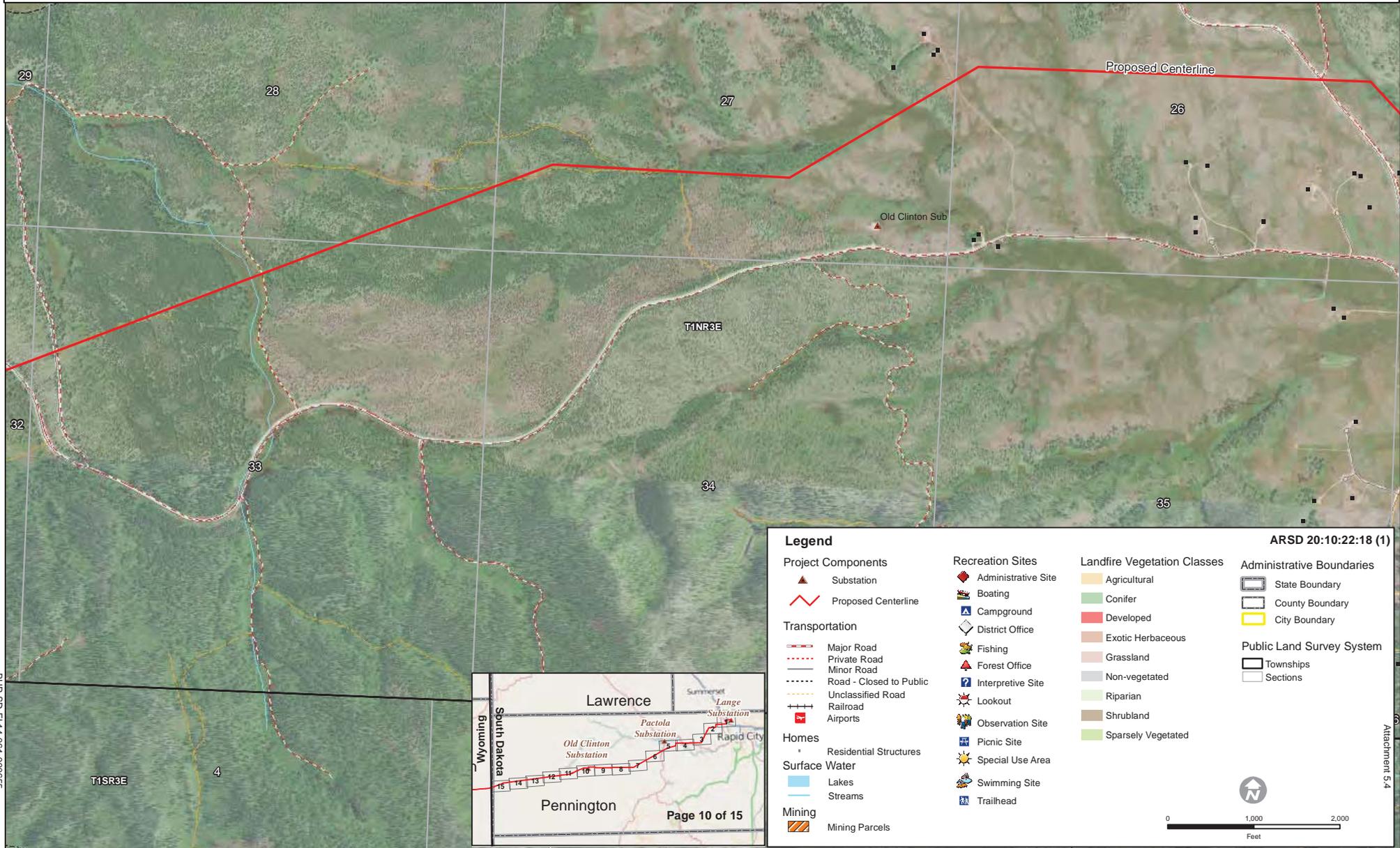
Legend ARSD 20:10:22:18 (1)

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Attachment 5.4

Figure 8 - Existing Land Use 230 kV Transmission Project



Legend ARSD 20:10:22:18 (1)

<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Transportation</p> <ul style="list-style-type: none"> Major Road Private Road Minor Road Road - Closed to Public Unclassified Road Railroad Airports <p>Homes</p> <ul style="list-style-type: none"> Residential Structures <p>Surface Water</p> <ul style="list-style-type: none"> Lakes Streams <p>Mining</p> <ul style="list-style-type: none"> Mining Parcels 	<p>Recreation Sites</p> <ul style="list-style-type: none"> Administrative Site Boating Campground District Office Fishing Forest Office Interpretive Site Lookout Observation Site Picnic Site Special Use Area Swimming Site Trailhead 	<p>Landfire Vegetation Classes</p> <ul style="list-style-type: none"> Agricultural Conifer Developed Exotic Herbaceous Grassland Non-vegetated Riparian Shrubland Sparsely Vegetated 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections
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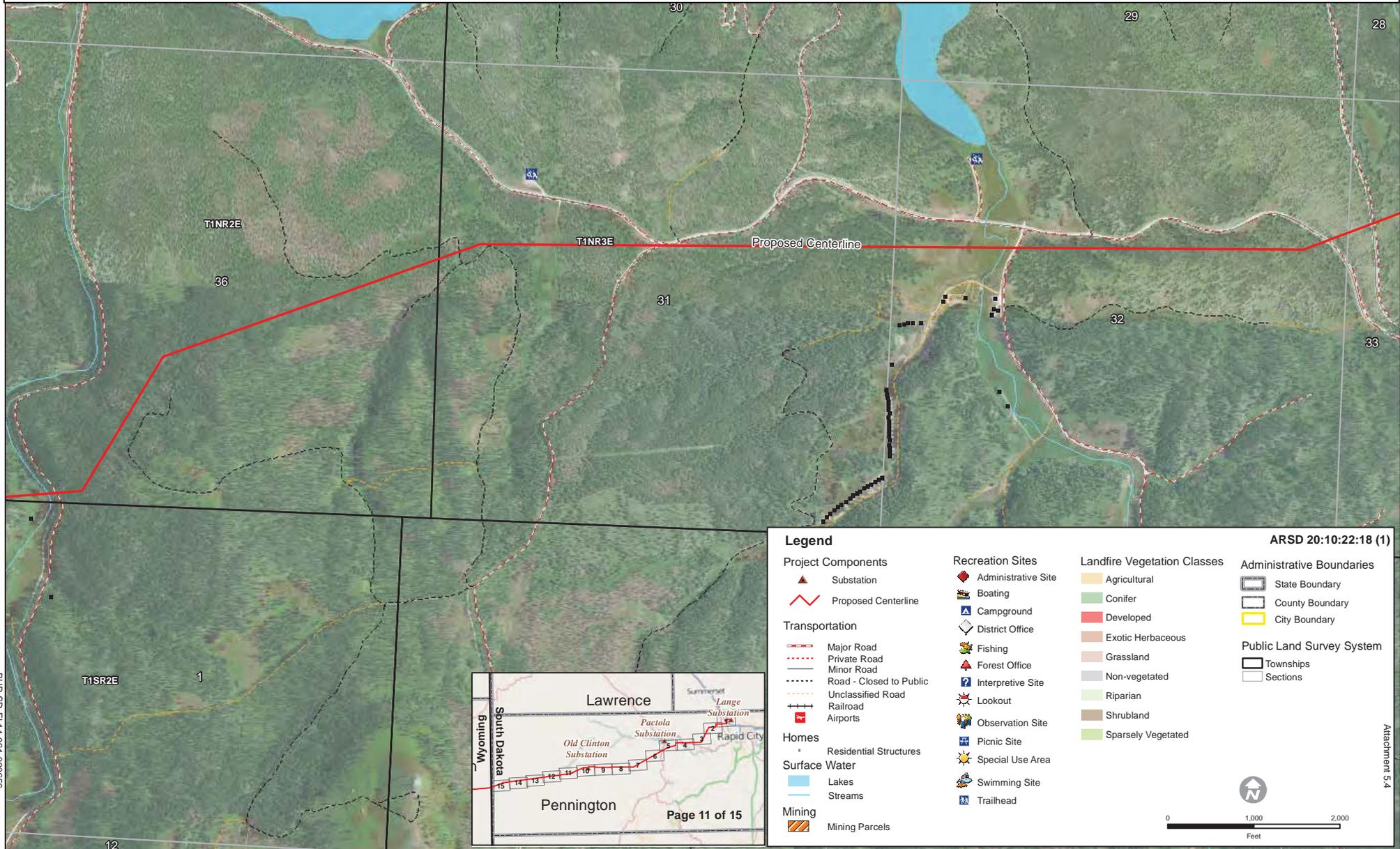
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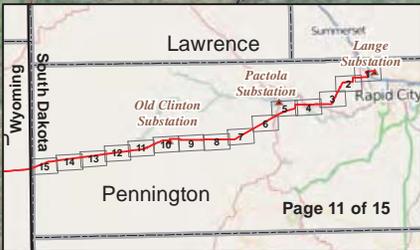
BHP-SD-EL14-061-000655

Attachment 5.4

Figure 8 - Existing Land Use 230 kV Transmission Project



BHP-SD-EL14-061-000656

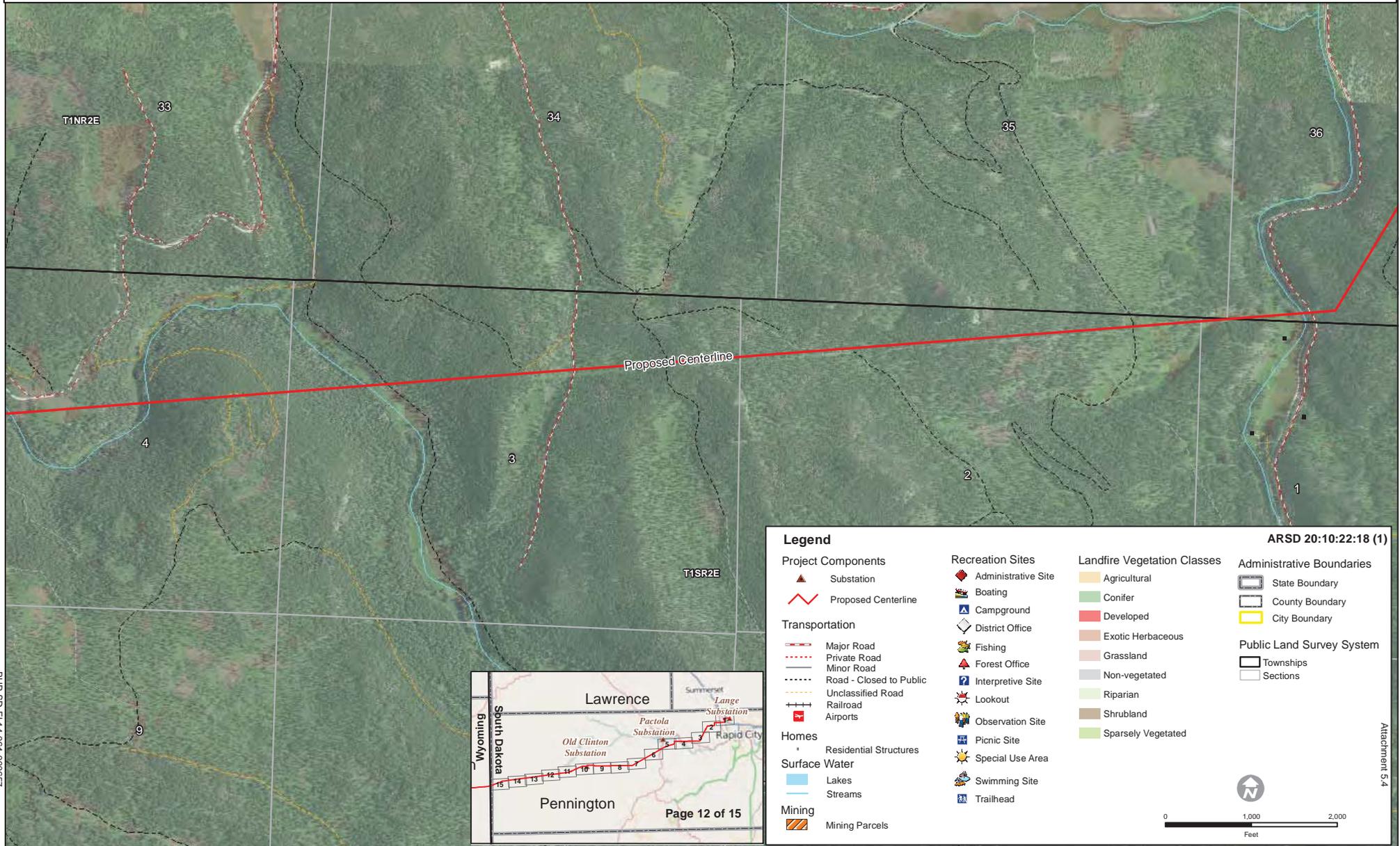


Legend ARSD 20:10:22:18 (1)

<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Transportation</p> <ul style="list-style-type: none"> Major Road Private Road Minor Road Road - Closed to Public Unclassified Road Railroad Airports <p>Homes</p> <ul style="list-style-type: none"> Residential Structures <p>Surface Water</p> <ul style="list-style-type: none"> Lakes Streams <p>Mining</p> <ul style="list-style-type: none"> Mining Parcels 	<p>Recreation Sites</p> <ul style="list-style-type: none"> Administrative Site Boating Campground District Office Fishing Forest Office Interpretive Site Lookout Observation Site Picnic Site Special Use Area Swimming Site Trailhead 	<p>Landfire Vegetation Classes</p> <ul style="list-style-type: none"> Agricultural Conifer Developed Exotic Herbaceous Grassland Non-vegetated Riparian Shrubland Sparsely Vegetated 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections
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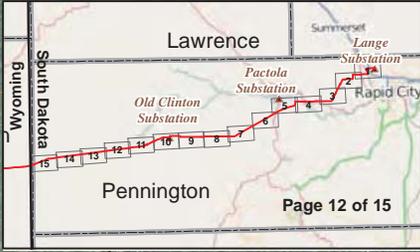
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Figure 8 - Existing Land Use 230 kV Transmission Project



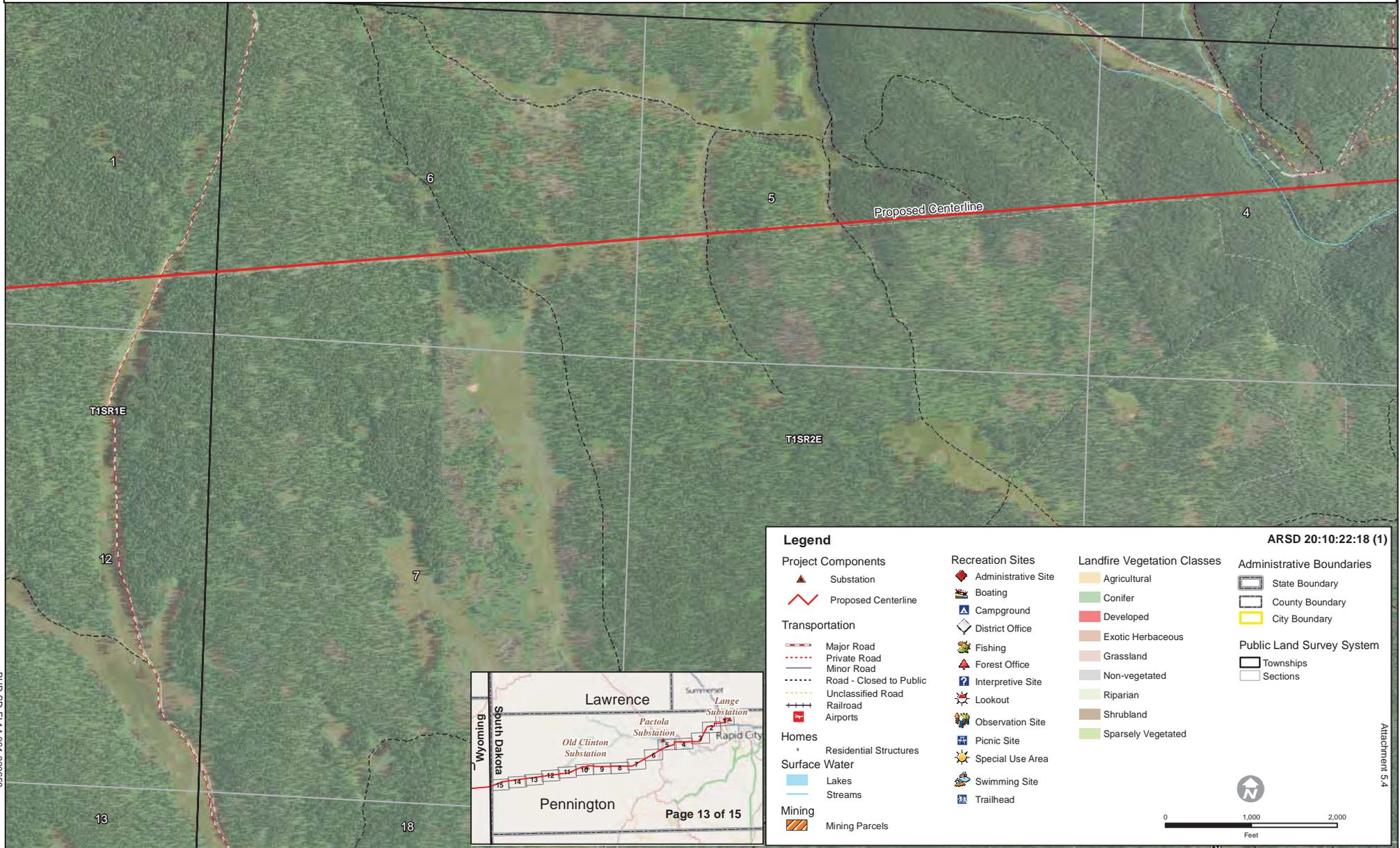
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<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Transportation</p> <ul style="list-style-type: none"> Major Road Private Road Minor Road Road - Closed to Public Unclassified Road Railroad Airports <p>Homes</p> <ul style="list-style-type: none"> Residential Structures <p>Surface Water</p> <ul style="list-style-type: none"> Lakes Streams <p>Mining</p> <ul style="list-style-type: none"> Mining Parcels 	<p>Recreation Sites</p> <ul style="list-style-type: none"> Administrative Site Boating Campground District Office Fishing Forest Office Interpretive Site Lookout Observation Site Picnic Site Special Use Area Swimming Site Trailhead 	<p>Landfire Vegetation Classes</p> <ul style="list-style-type: none"> Agricultural Conifer Developed Exotic Herbaceous Grassland Non-vegetated Riparian Shrubland Sparsely Vegetated 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections
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BHP-SD-EL14-061-000657

Attachment 5.4



ARSD 20:10:22:18 (1)

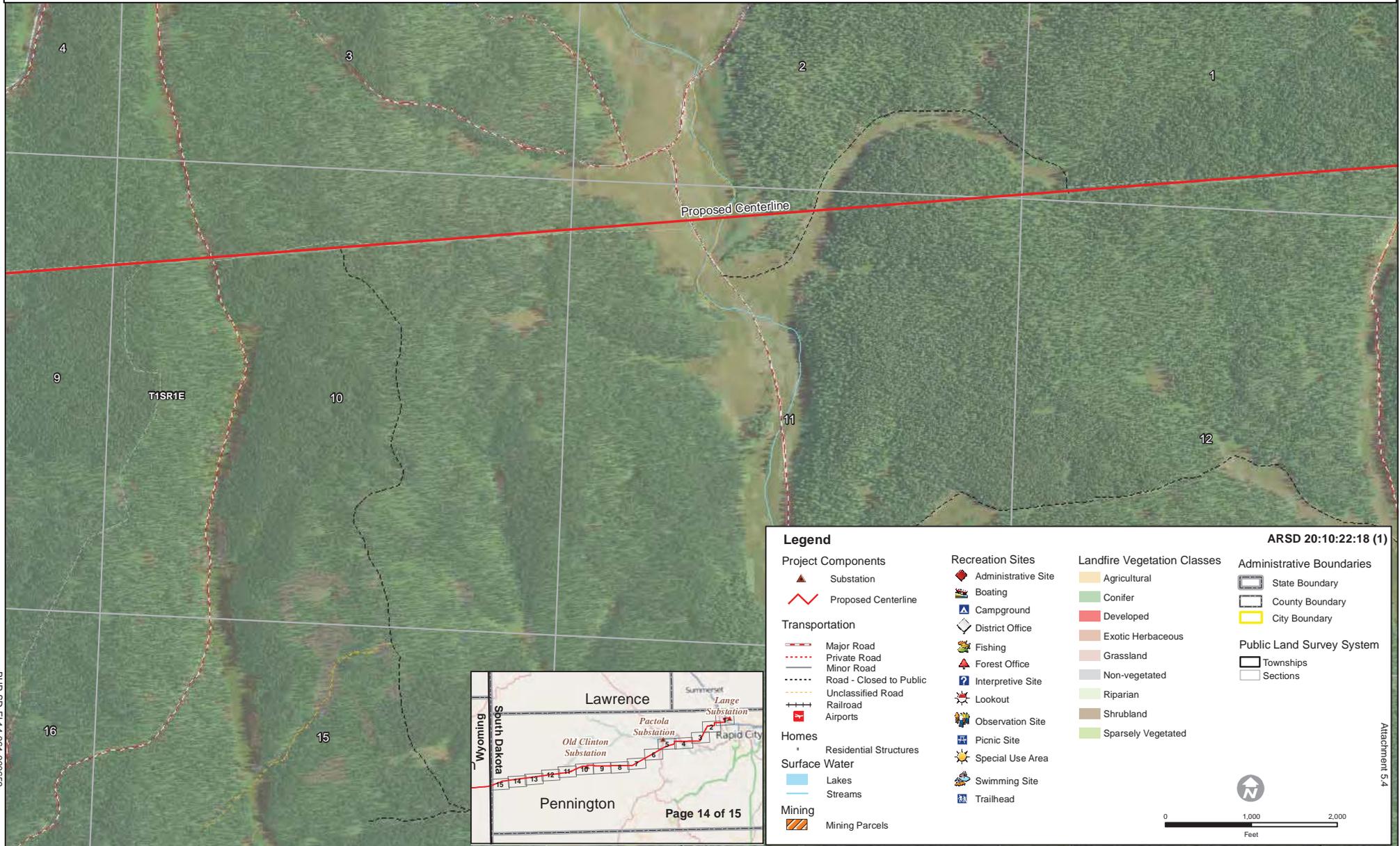
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BHP-SD-EL14-061-000688

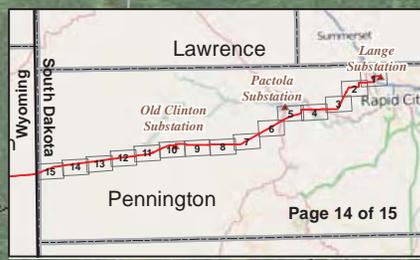
Attachment 5.4

Figure 8 - Existing Land Use 230 kV Transmission Project



Legend ARSD 20:10:22:18 (1)

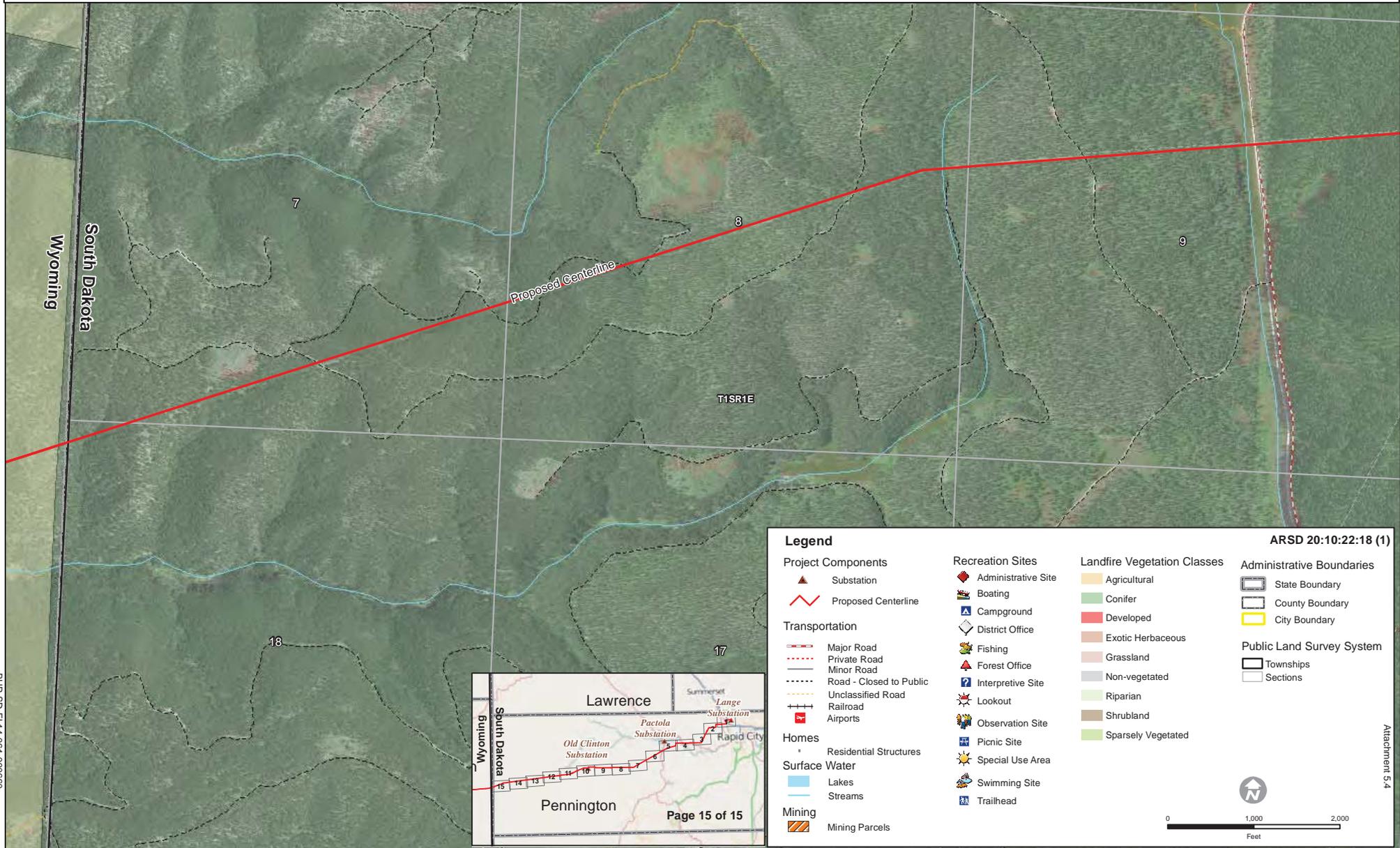
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BHP-SD-EL14-061-000659

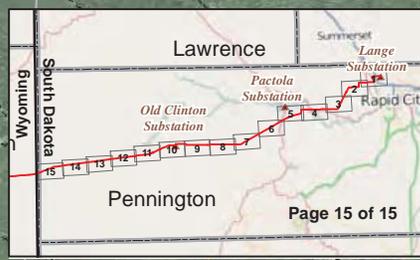
Attachment 5.4

Figure 8 - Existing Land Use 230 kV Transmission Project



Legend ARSD 20:10:22:18 (1)

<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Transportation</p> <ul style="list-style-type: none"> Major Road Private Road Minor Road Road - Closed to Public Unclassified Road Railroad Airports <p>Homes</p> <ul style="list-style-type: none"> Residential Structures <p>Surface Water</p> <ul style="list-style-type: none"> Lakes Streams <p>Mining</p> <ul style="list-style-type: none"> Mining Parcels 	<p>Recreation Sites</p> <ul style="list-style-type: none"> Administrative Site Boating Campground District Office Fishing Forest Office Interpretive Site Lookout Observation Site Picnic Site Special Use Area Swimming Site Trailhead 	<p>Landfire Vegetation Classes</p> <ul style="list-style-type: none"> Agricultural Conifer Developed Exotic Herbaceous Grassland Non-vegetated Riparian Shrubland Sparsely Vegetated 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections
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BHP-SD-EL14-061-000680

BLACK HILLS POWER, INC.
SD PUC DOCKET: EL14-061

REQUEST DATE : August 21, 2014

RESPONSE DATE : October 3, 2014

REQUESTING PARTY: SDPUC Staff

SDPUC Request No. 6:

Per ARSD 20:10:22:11, please ensure “map[s] show prominent features such as cities, lakes, and rivers; and maps show cemeteries, places of historical significance, transportation facilities, or other public facilities adjacent to or abutting the plant or transmission site.” If none of the features exist in the mapped area, please clearly state such.

Response to SDPUC Request No. 6:

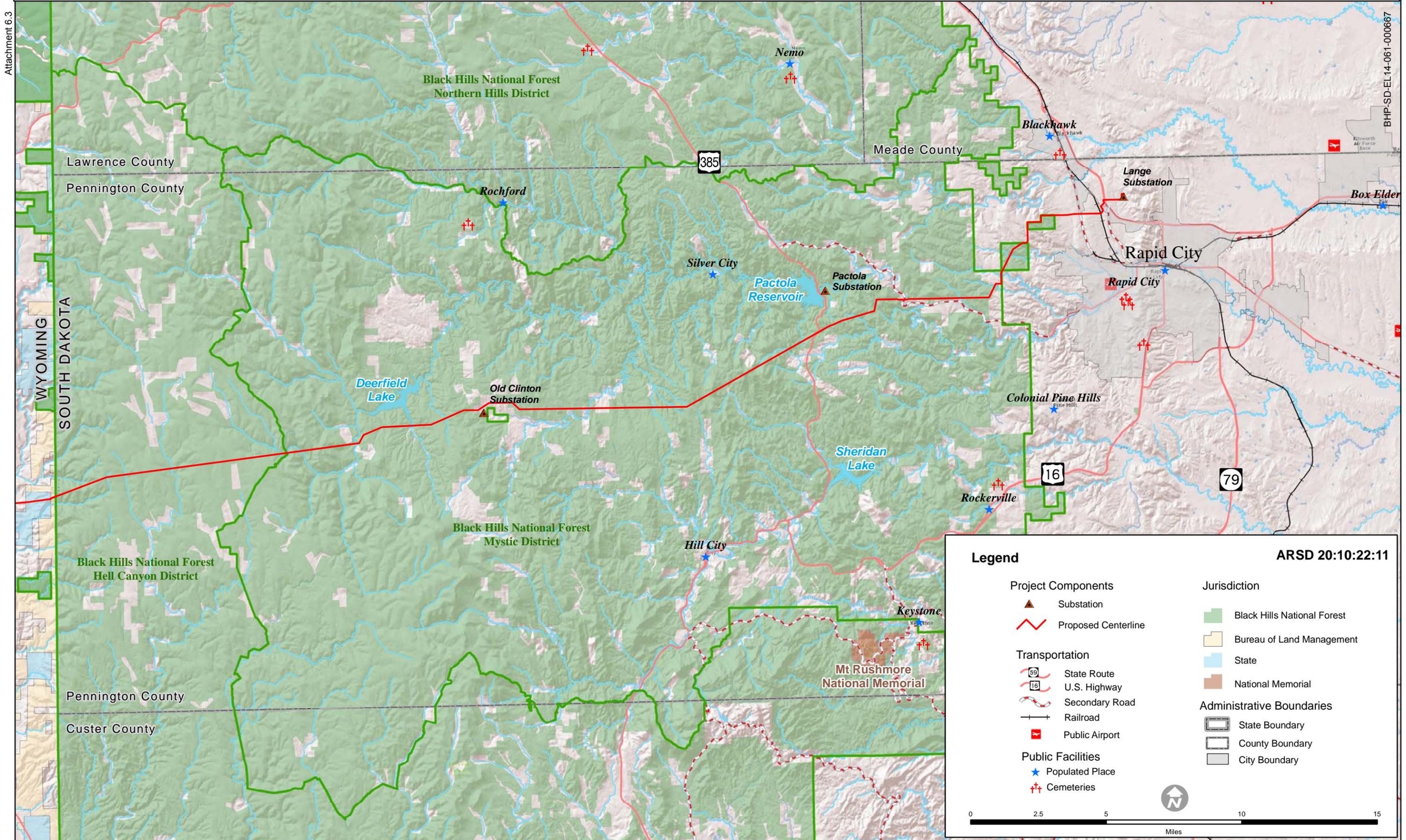
Please see Attachments 6.1 and 6.2.

Supplemental Response to SDPUC Request No. 6:

The final route is reflected in Attachments 6.3 – Revised General Site Location and 6.4 – Revised Existing Roads.

Attachments: Attachment 6.3 – Revised General Site Location
Attachment 6.4 – Revised Existing Roads

Attachment 6.3



BHP-SD-EL-14-061-000667

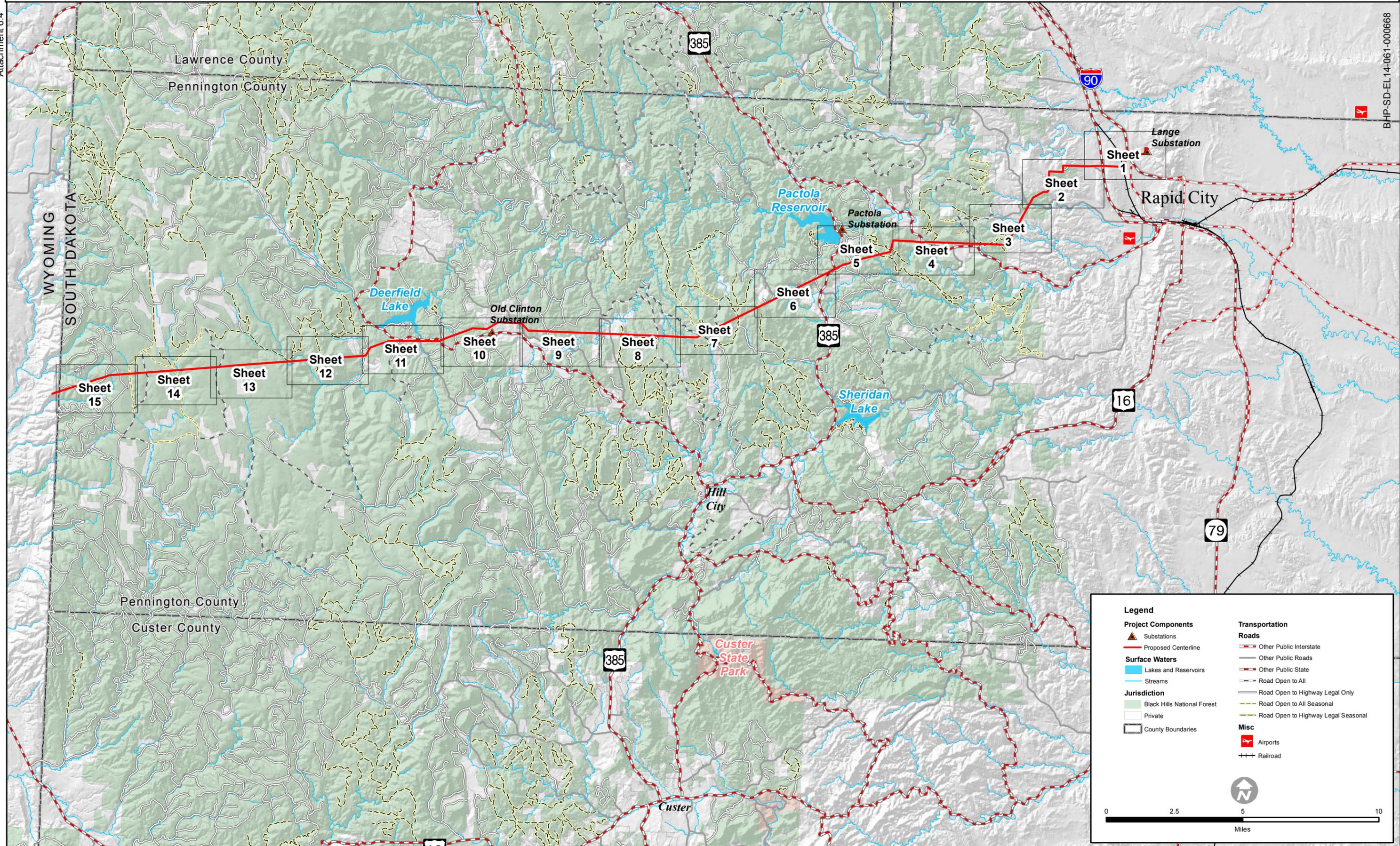
Legend ARSD 20:10:22:11

Project Components	Jurisdiction
▲ Substation	■ Black Hills National Forest
— Proposed Centerline	■ Bureau of Land Management
Transportation	■ State
⑤ State Route	■ National Memorial
①⑥ U.S. Highway	
— Secondary Road	
— Railroad	Administrative Boundaries
✈ Public Airport	▭ State Boundary
Public Facilities	▭ County Boundary
★ Populated Place	▭ City Boundary
†† Cemeteries	

0 2.5 5 10 15
Miles

Attachment 6.4

BHP-SD-EL 14-061-000668



Attachment 6.4

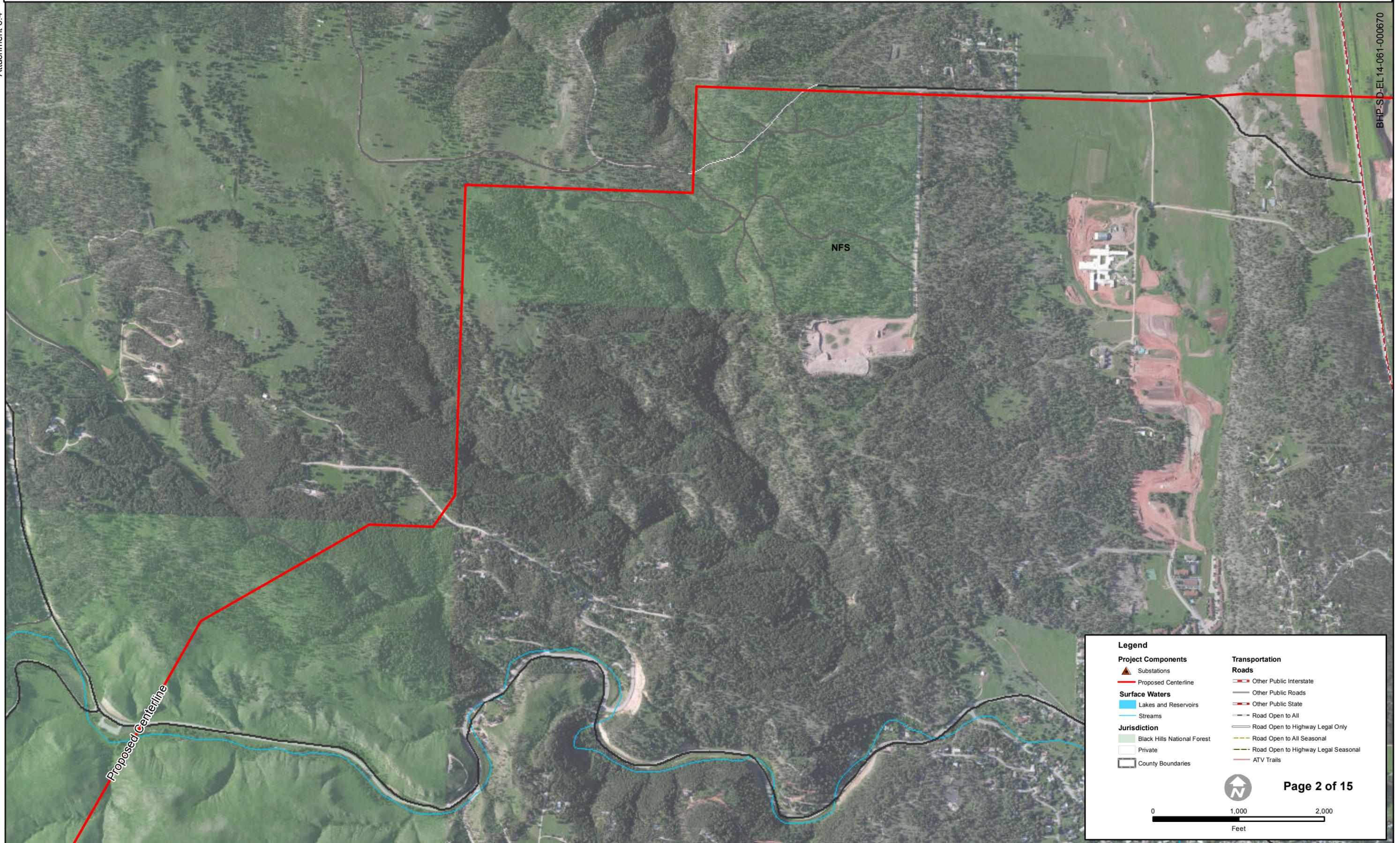
BHP-SD-EL-14-061-000669



Legend	
Project Components	Transportation Roads
▲ Substations	Other Public Interstate
— Proposed Centerline	Other Public Roads
Surface Waters	Other Public State
■ Lakes and Reservoirs	— Road Open to All
— Streams	— Road Open to Highway Legal Only
Jurisdiction	— Road Open to All Seasonal
■ Black Hills National Forest	— Road Open to Highway Legal Seasonal
■ Private	— ATV Trails
■ County Boundaries	

Page 1 of 15

0 1,000 2,000
Feet



Legend

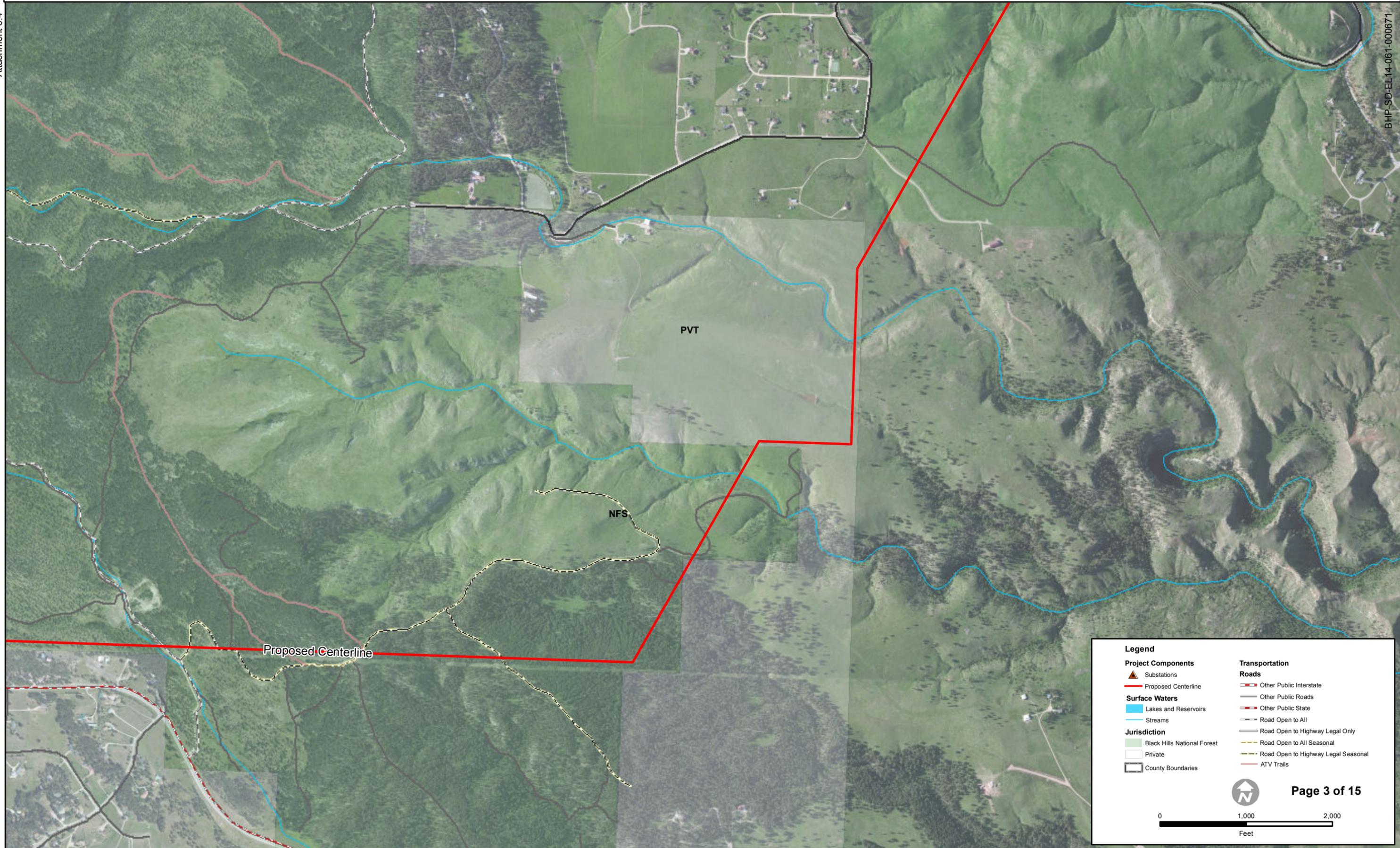
Project Components	Transportation Roads
▲ Substations	Other Public Interstate
— Proposed Centerline	Other Public Roads
Surface Waters	Other Public State
■ Lakes and Reservoirs	— Road Open to All
— Streams	— Road Open to Highway Legal Only
Jurisdiction	— Road Open to All Seasonal
■ Black Hills National Forest	— Road Open to Highway Legal Seasonal
■ Private	— ATV Trails
■ County Boundaries	

0 1,000 2,000
Feet

Page 2 of 15

Attachment 6.4

BHP-SD-EL-14-061-000671



Legend	
Project Components	Transportation Roads
▲ Substations	Other Public Interstate
— Proposed Centerline	Other Public Roads
Surface Waters	Other Public State
■ Lakes and Reservoirs	— Road Open to All
— Streams	— Road Open to Highway Legal Only
Jurisdiction	— Road Open to All Seasonal
■ Black Hills National Forest	— Road Open to Highway Legal Seasonal
□ Private	— ATV Trails
□ County Boundaries	

Page 3 of 15

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Legend	
Project Components	Transportation Roads
▲ Substations	Other Public Interstate
— Proposed Centerline	Other Public Roads
Surface Waters	Other Public State
■ Lakes and Reservoirs	— Road Open to All
— Streams	— Road Open to Highway Legal Only
Jurisdiction	— Road Open to All Seasonal
■ Black Hills National Forest	— Road Open to Highway Legal Seasonal
■ Private	— ATV Trails
■ County Boundaries	

 **Page 4 of 15**




Attachment 6.4

BHP-SD-EL 14-061-000674



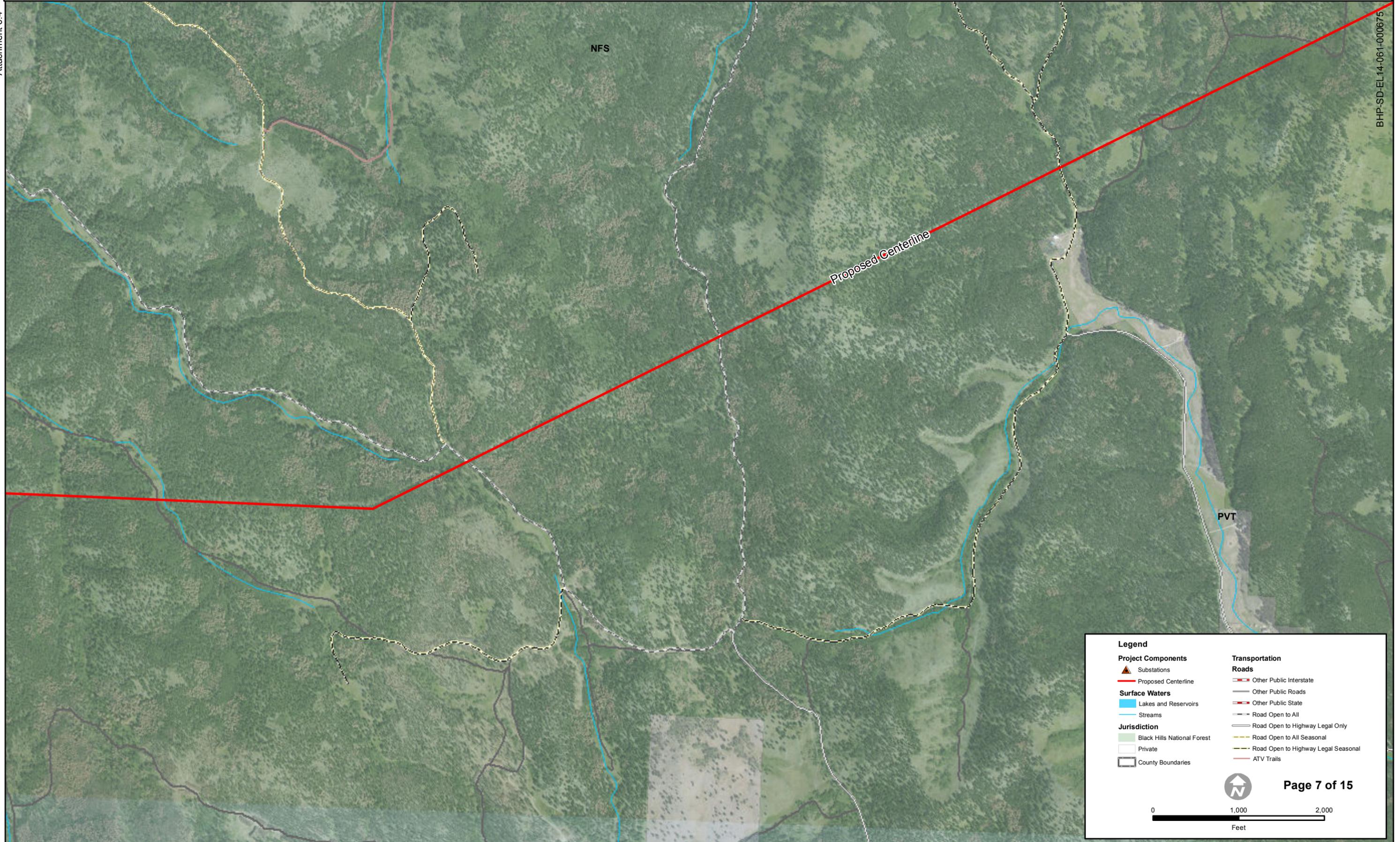
Legend	
Project Components	Transportation Roads
▲ Substations	Other Public Interstate
— Proposed Centerline	Other Public Roads
Surface Waters	Other Public State
■ Lakes and Reservoirs	— Road Open to All
— Streams	— Road Open to Highway Legal Only
Jurisdiction	— Road Open to All Seasonal
■ Black Hills National Forest	— Road Open to Highway Legal Seasonal
□ Private	— ATV Trails
□ County Boundaries	

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Feet

Page 6 of 15

Attachment 6.4

BHP-SD-EL 14-061-000675



Legend

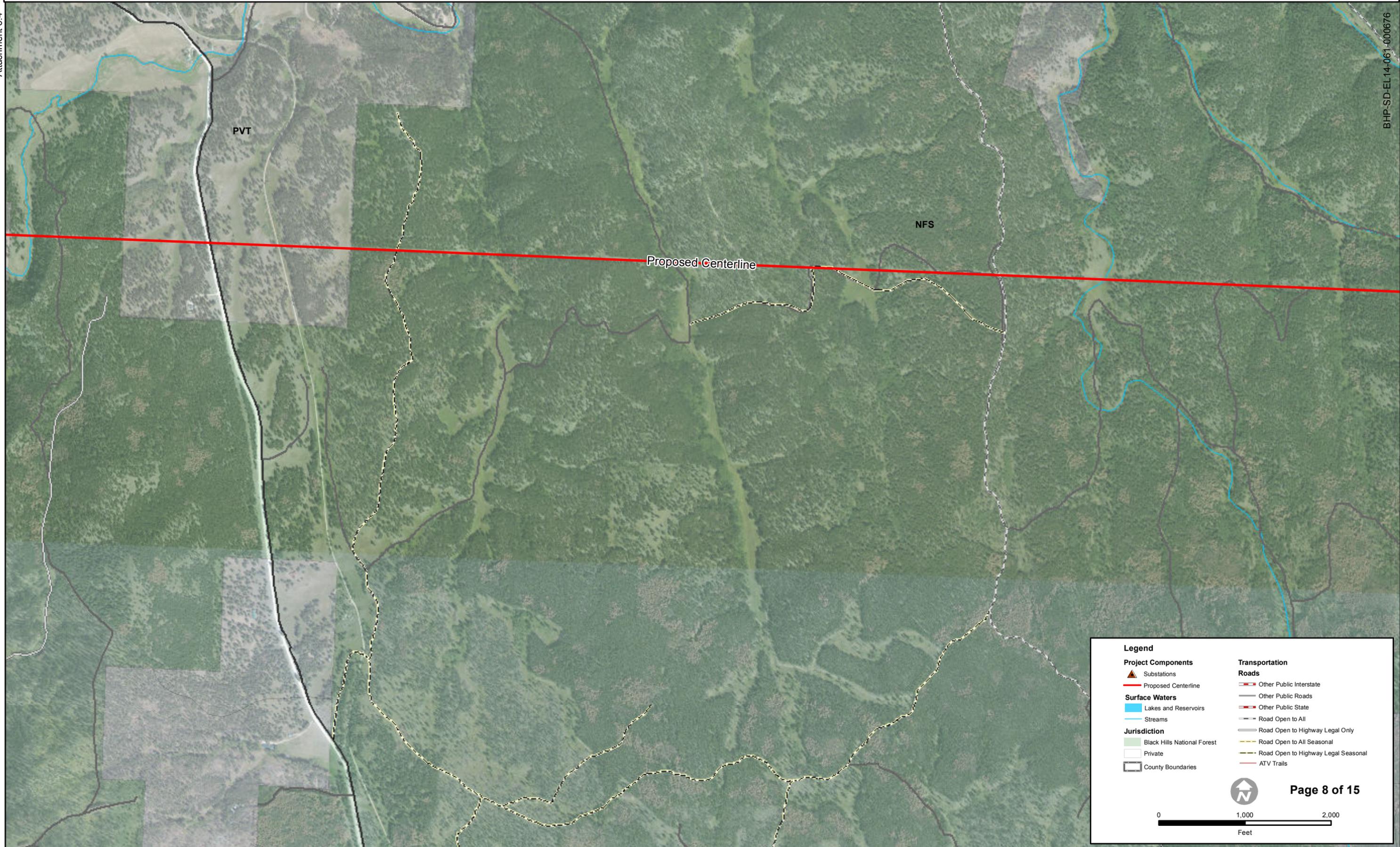
Project Components	Transportation Roads
▲ Substations	Other Public Interstate
— Proposed Centerline	Other Public Roads
Surface Waters	Other Public State
■ Lakes and Reservoirs	— Road Open to All
— Streams	— Road Open to Highway Legal Only
Jurisdiction	— Road Open to All Seasonal
■ Black Hills National Forest	— Road Open to Highway Legal Seasonal
■ Private	— ATV Trails
■ County Boundaries	

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Feet

Page 7 of 15

Attachment 6.4

BHP-SD-EL 14-061-000676



Legend	
Project Components	Transportation Roads
▲ Substations	Other Public Interstate
— Proposed Centerline	Other Public Roads
Surface Waters	Other Public State
■ Lakes and Reservoirs	— Road Open to All
— Streams	— Road Open to Highway Legal Only
Jurisdiction	— Road Open to All Seasonal
■ Black Hills National Forest	— Road Open to Highway Legal Seasonal
□ Private	— ATV Trails
□ County Boundaries	

Page 8 of 15

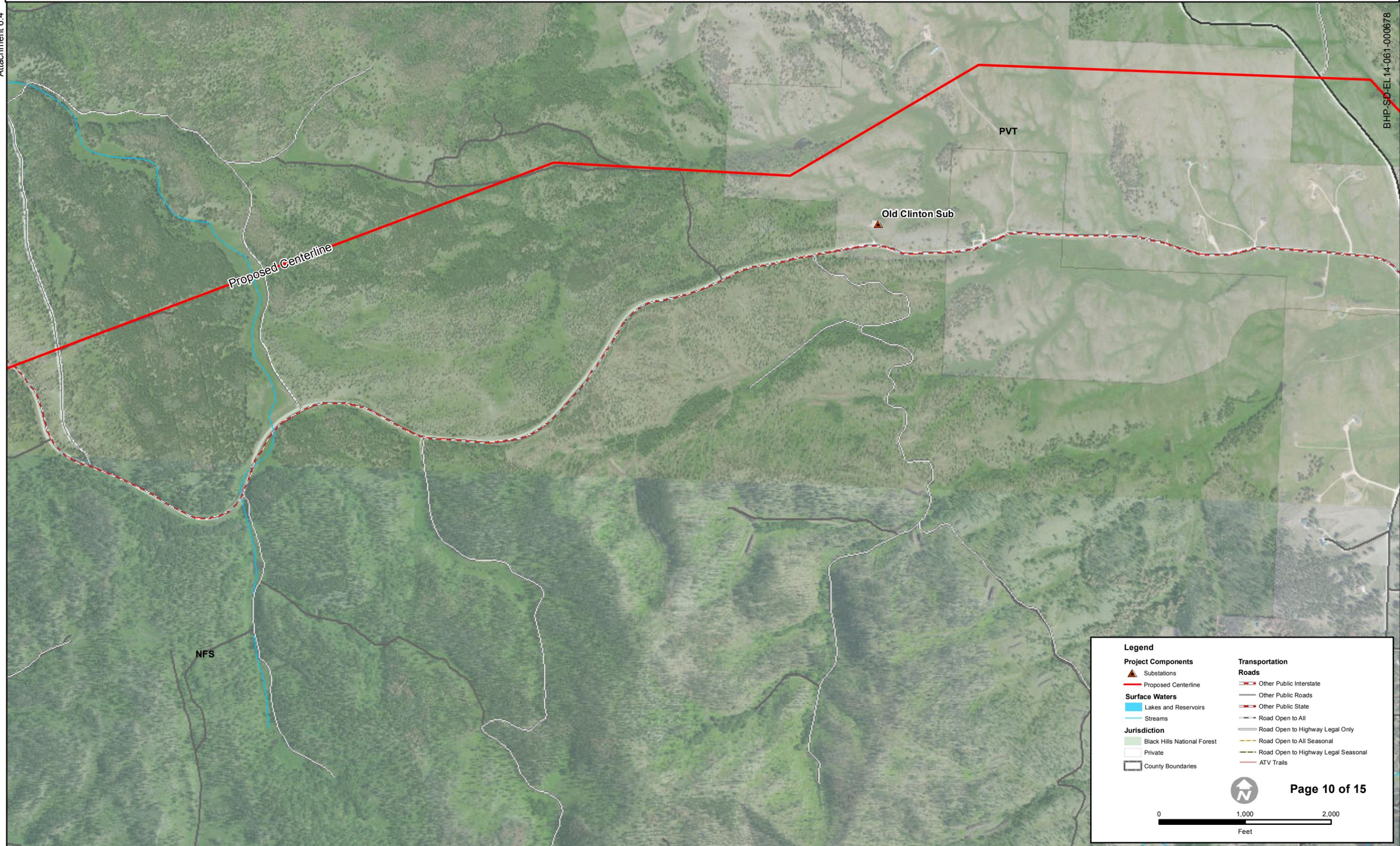
Attachment 6.4

BHP-SD-EL 14-061-000677



Attachment 6.4

BHP-SD-EL 14-061-000678



Legend

Project Components	Transportation Roads
▲ Substations	Other Public Interstate
— Proposed Centerline	Other Public Roads
Surface Waters	Other Public State
■ Lakes and Reservoirs	— Road Open to All
— Streams	— Road Open to Highway Legal Only
Jurisdiction	— Road Open to All Seasonal
■ Black Hills National Forest	— Road Open to Highway Legal Seasonal
□ Private	— ATV Trails
□ County Boundaries	

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Feet

Page 10 of 15

Attachment 6.4

BHP-SD-EL-14-061-000679



Legend

Project Components	Transportation Roads
▲ Substations	Other Public Interstate
— Proposed Centerline	Other Public Roads
Surface Waters	Other Public State
■ Lakes and Reservoirs	— Road Open to All
— Streams	— Road Open to Highway Legal Only
Jurisdiction	— Road Open to All Seasonal
■ Black Hills National Forest	— Road Open to Highway Legal Seasonal
■ Private	— ATV Trails
■ County Boundaries	

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Feet

Page 11 of 15



Legend

Project Components	Transportation Roads
▲ Substations	Other Public Interstate
— Proposed Centerline	Other Public Roads
Surface Waters	Other Public State
■ Lakes and Reservoirs	— Road Open to All
— Streams	— Road Open to Highway Legal Only
Jurisdiction	— Road Open to All Seasonal
■ Black Hills National Forest	— Road Open to Highway Legal Seasonal
□ Private	— ATV Trails
□ County Boundaries	

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Feet

Page 12 of 15

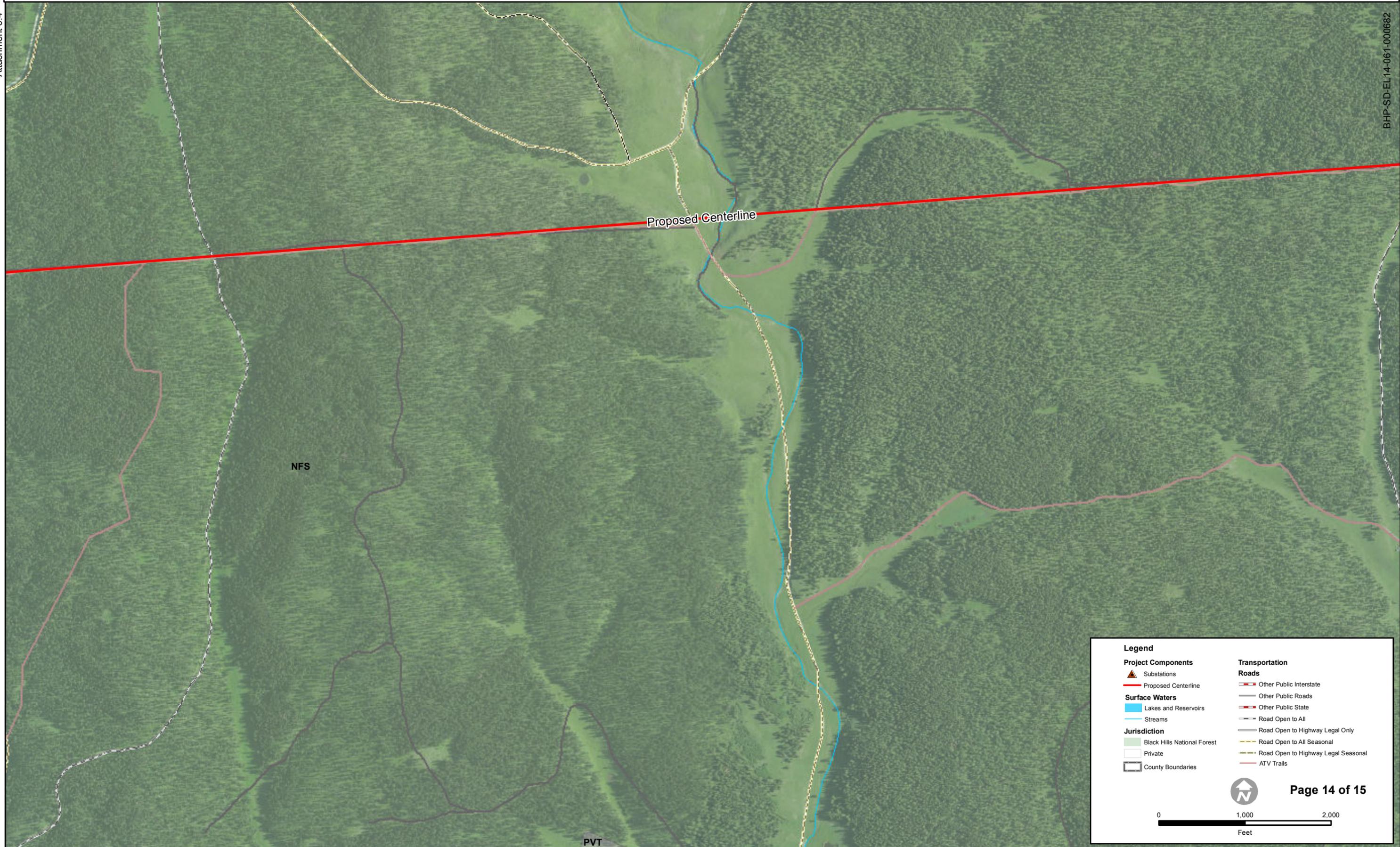
Attachment 6.4

BHP-SD-EL 14-061-000681



Attachment 6.4

BHP-SD-EL 14-061-000682



Legend

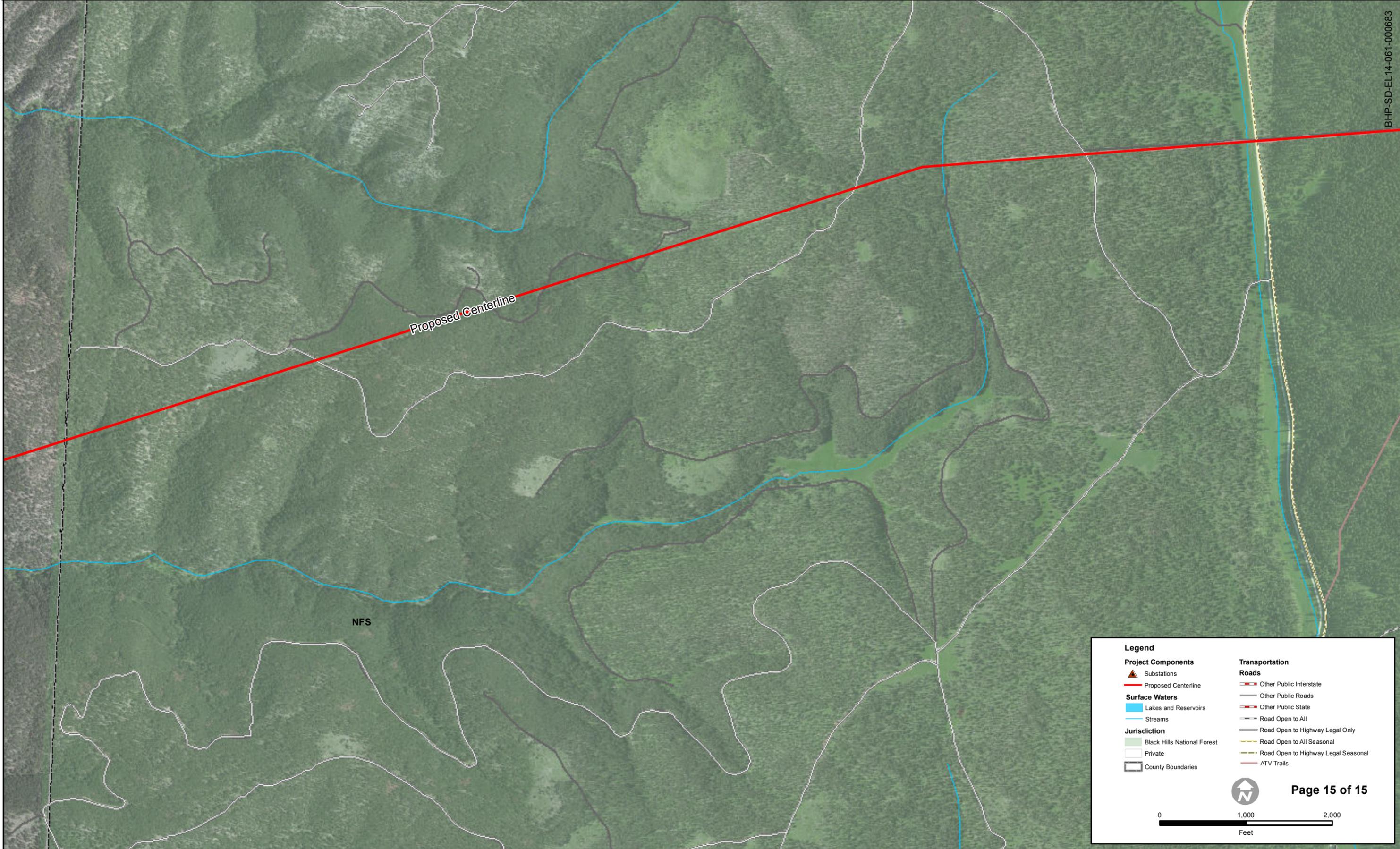
Project Components	Transportation Roads
▲ Substations	Other Public Interstate
— Proposed Centerline	Other Public Roads
Surface Waters	Other Public State
■ Lakes and Reservoirs	— Road Open to All
— Streams	— Road Open to Highway Legal Only
Jurisdiction	— Road Open to All Seasonal
■ Black Hills National Forest	— Road Open to Highway Legal Seasonal
■ Private	— ATV Trails
■ County Boundaries	

 **Page 14 of 15**

 Feet

Attachment 6.4

BHP-SD-EL 14-061-000683



Legend	
Project Components	Transportation Roads
▲ Substations	Other Public Interstate
— Proposed Centerline	Other Public Roads
Surface Waters	Other Public State
■ Lakes and Reservoirs	— Road Open to All
— Streams	— Road Open to Highway Legal Only
Jurisdiction	— Road Open to All Seasonal
■ Black Hills National Forest	— Road Open to Highway Legal Seasonal
□ Private	— ATV Trails
□ County Boundaries	

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Feet

BLACK HILLS POWER, INC.
SD PUC DOCKET: EL14-061

REQUEST DATE : August 21, 2014

RESPONSE DATE : October 3, 2014

REQUESTING PARTY: SDPUC Staff

SDPUC Request No. 8:

Per ARSD 20:10:22:14(2), please provide legible topographic maps of the transmission site.

Response to SDPUC Request No. 8:

Please see Attachments 8.1 and 8.2

Supplemental Response to SDPUC Request No. 8:

The final route is reflected in Attachments 8.3 – Revised Geologic Map Units and 8.4 – Revised Physical Environment.

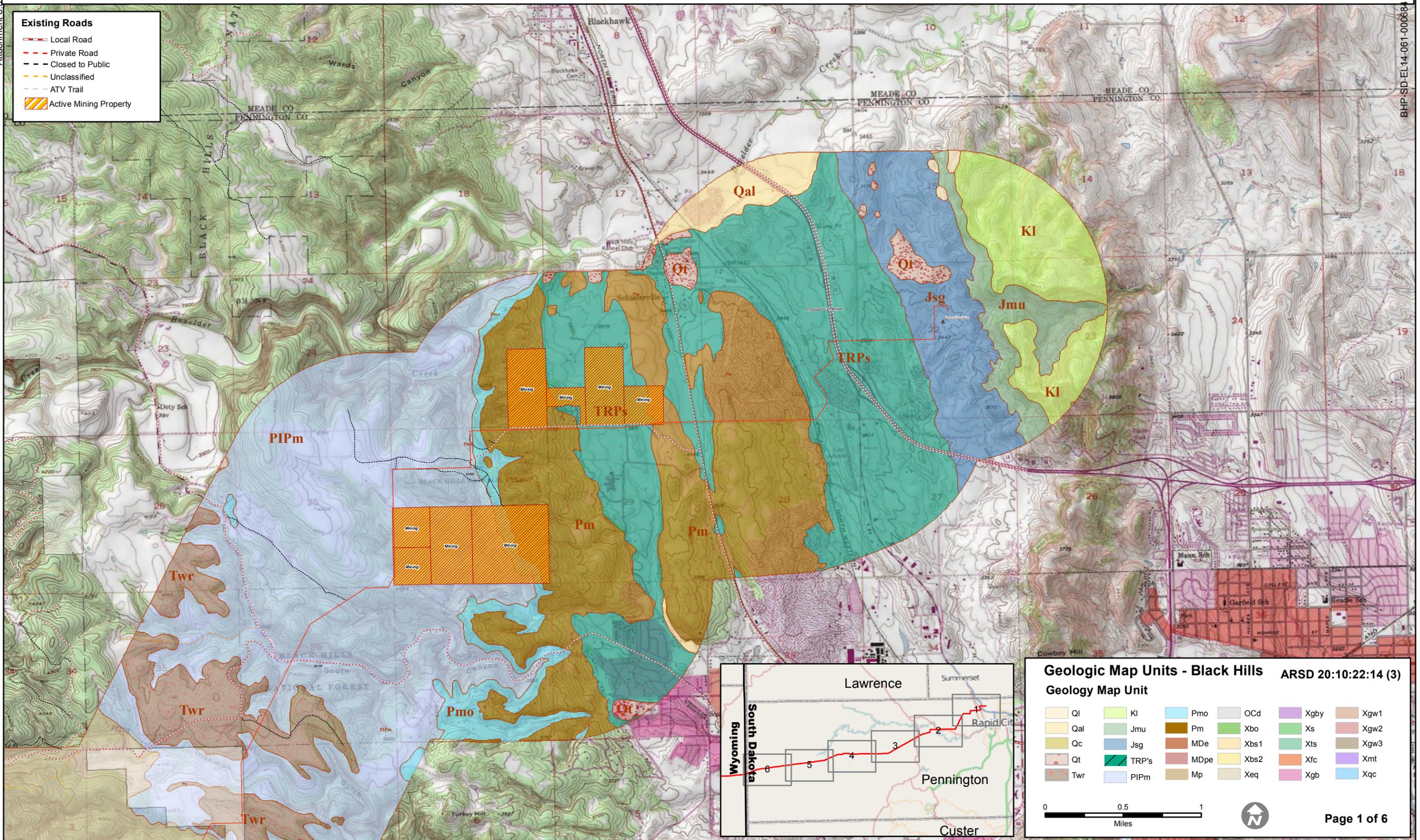
Attachments: Attachment 8.3 – Revised Geologic Map Units
Attachment 8.4 – Revised Physical Environment

Attachment 8.3

BHP-SD-EL-14-061-000684

Existing Roads

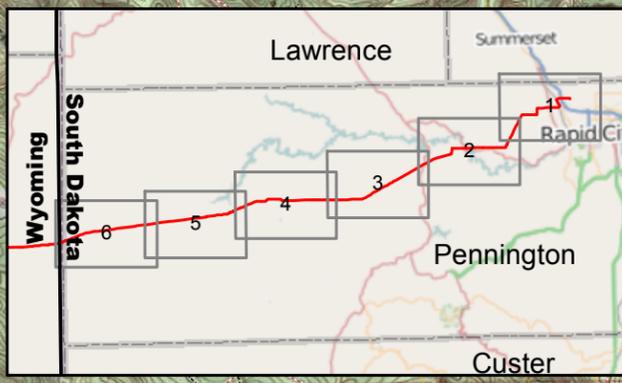
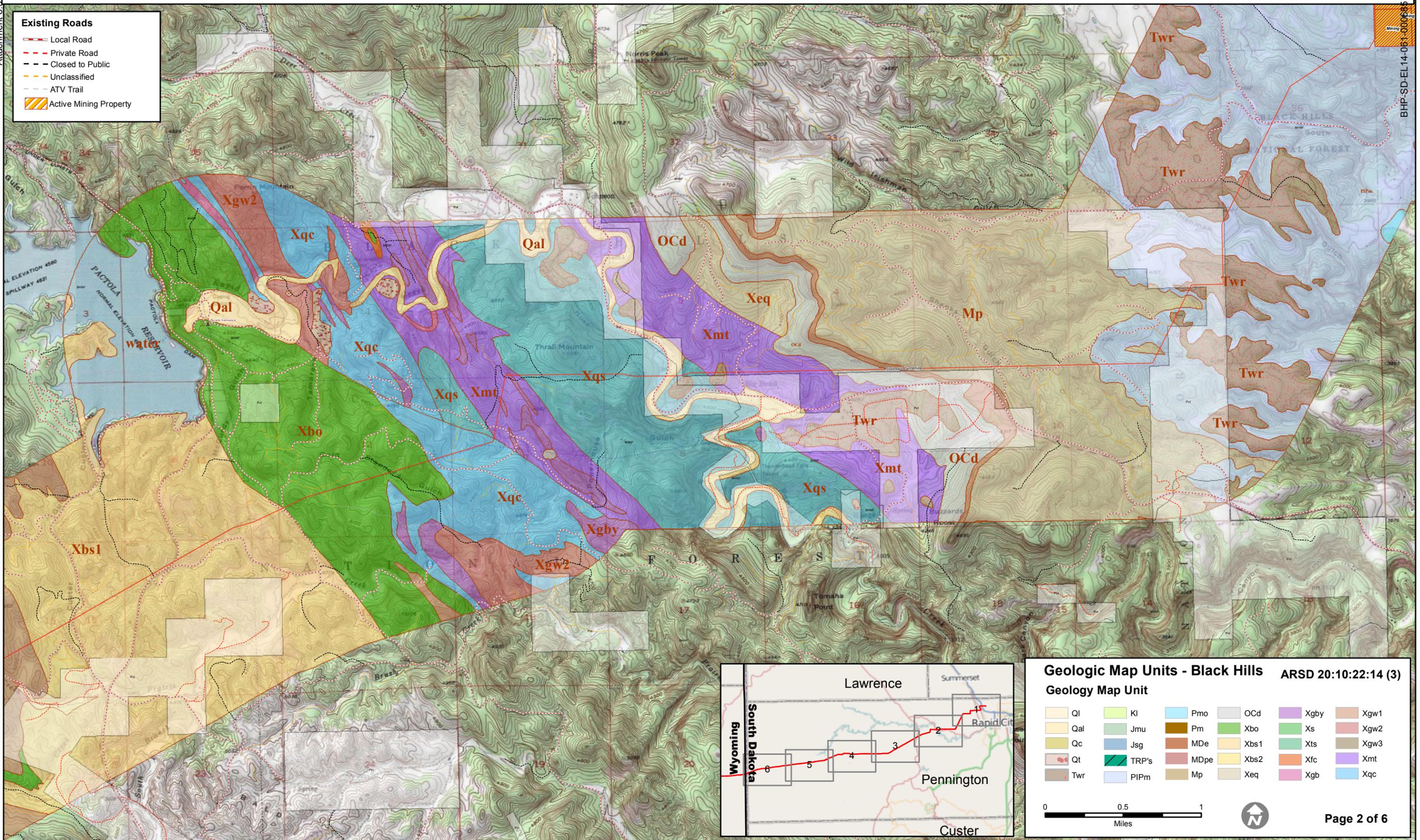
- Local Road
- Private Road
- Closed to Public
- Unclassified
- ATV Trail
- Active Mining Property



Attachment 8.3

Existing Roads

- Local Road
- Private Road
- Closed to Public
- Unclassified
- ATV Trail
- Active Mining Property



Geologic Map Units - Black Hills ARSD 20:10:22:14 (3)

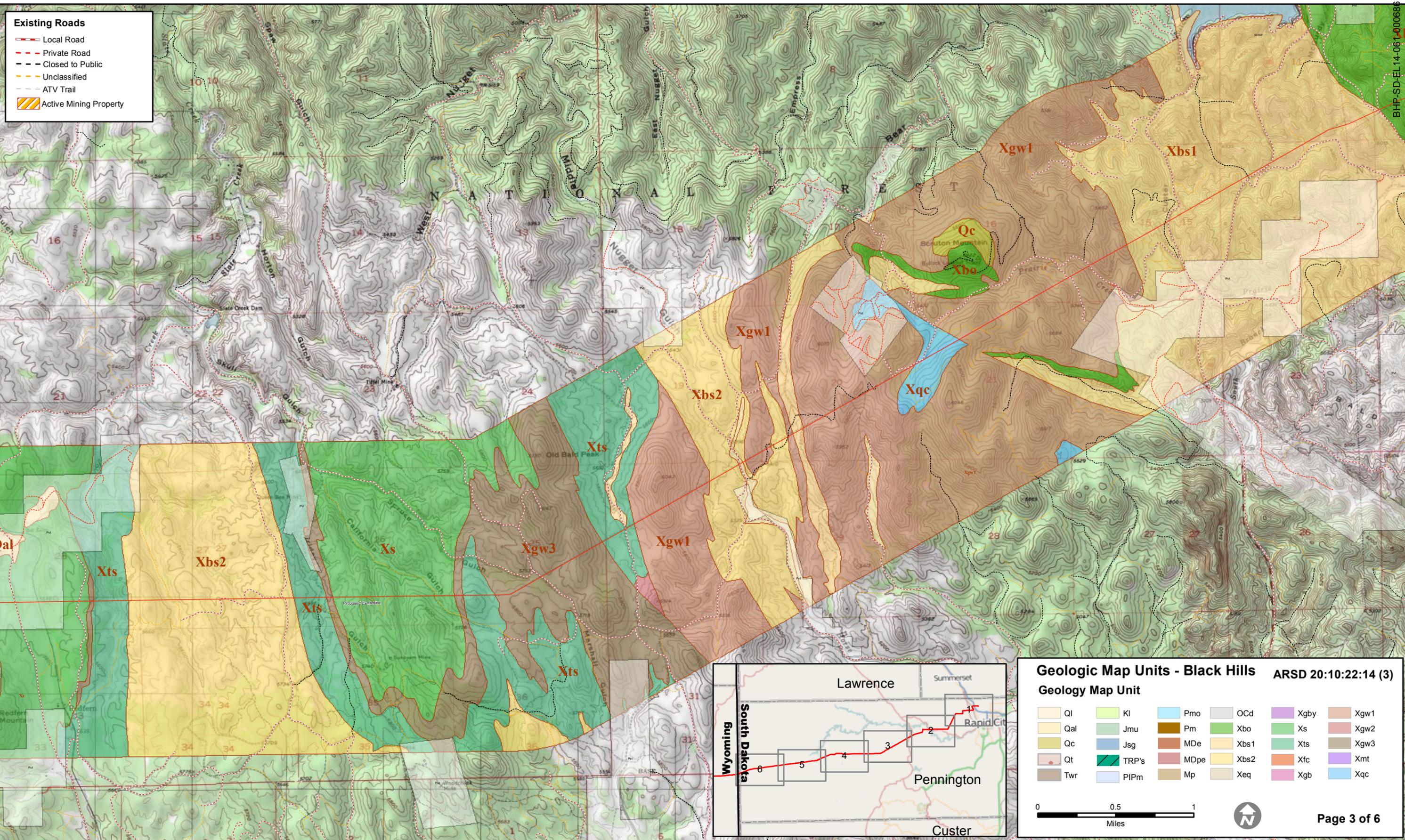
Geology Map Unit

Ql	KI	Pmo	OCd	Xgby	Xgw1
Qal	Jmu	Pm	Xbo	Xs	Xgw2
Qc	Jsg	MDe	Xbs1	Xts	Xgw3
Qt	TRP's	MDpe	Xbs2	Xfc	Xmt
Twr	PIPm	Mp	Xeq	Xgb	Xqc

0 0.5 1 Miles

Page 2 of 6

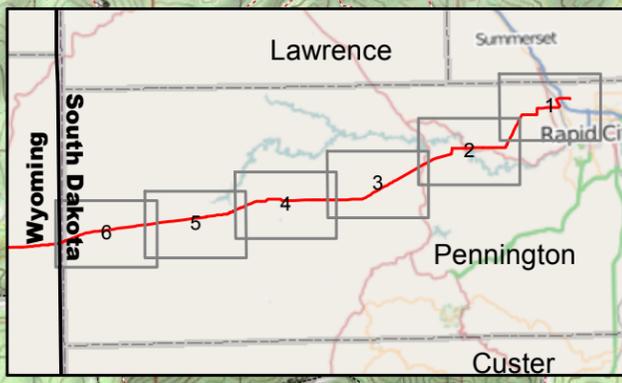
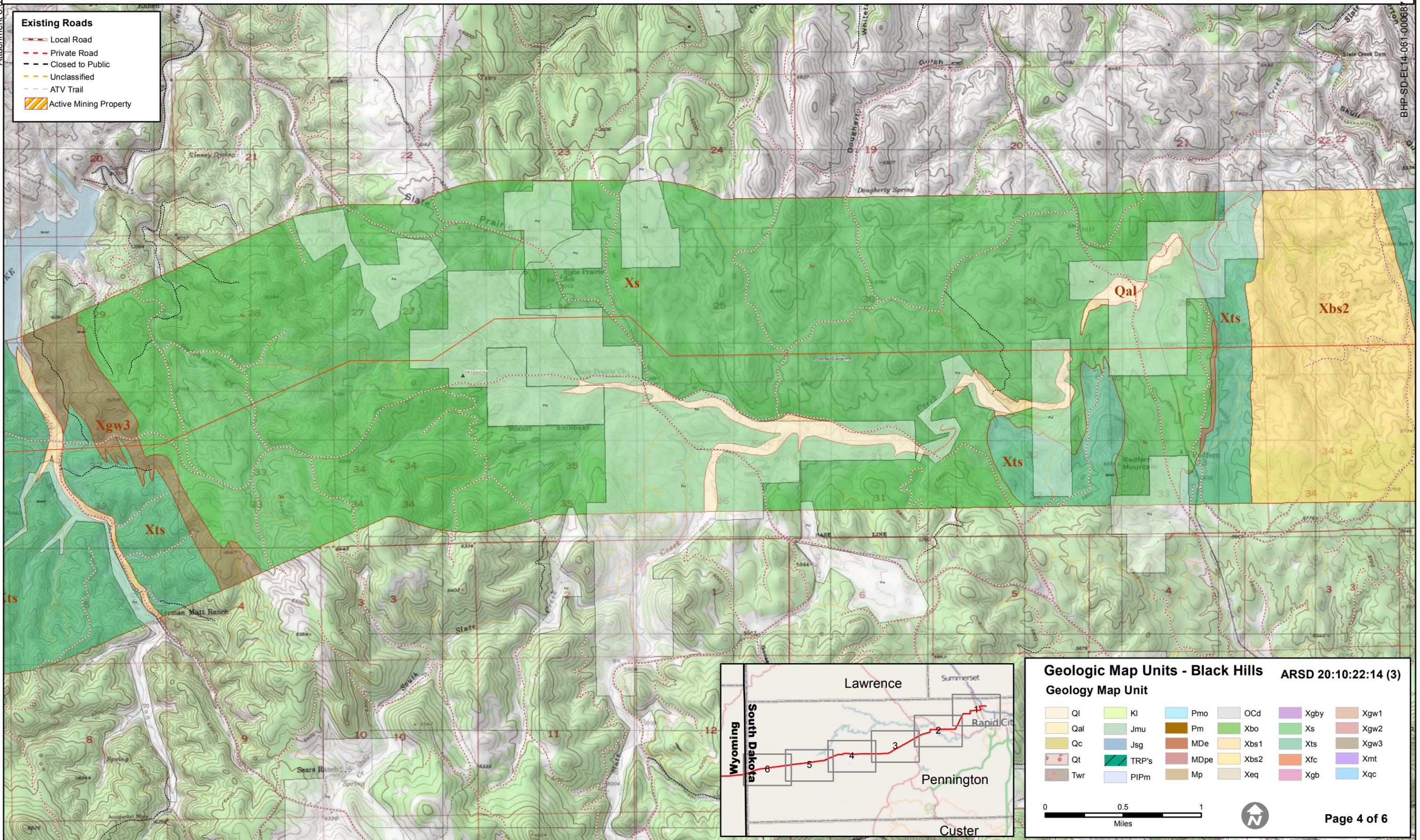
Attachment 8.3



Attachment 8.3

Existing Roads

- Local Road
- Private Road
- Closed to Public
- Unclassified
- ATV Trail
- Active Mining Property



Geologic Map Units - Black Hills ARSD 20:10:22:14 (3)

Geology Map Unit

Ql	KI	Pmo	OCd	Xgby	Xgw1
Qal	Jmu	Pm	Xbo	Xs	Xgw2
Qc	Jsg	MDpe	Xbs1	Xts	Xgw3
Qt	TRP's	MDpe	Xbs2	Xfc	Xmt
Twr	PIPm	Mp	Xeq	Xgb	Xqc

0 0.5 1
Miles

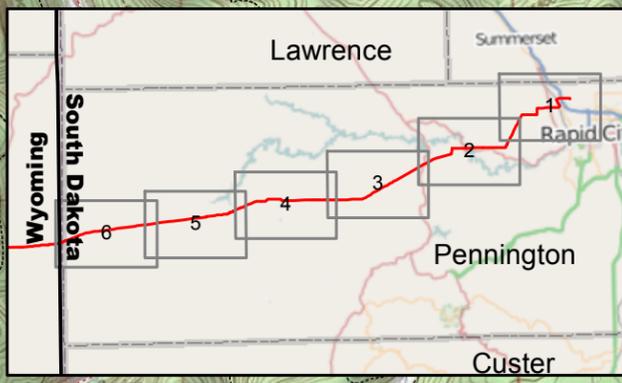
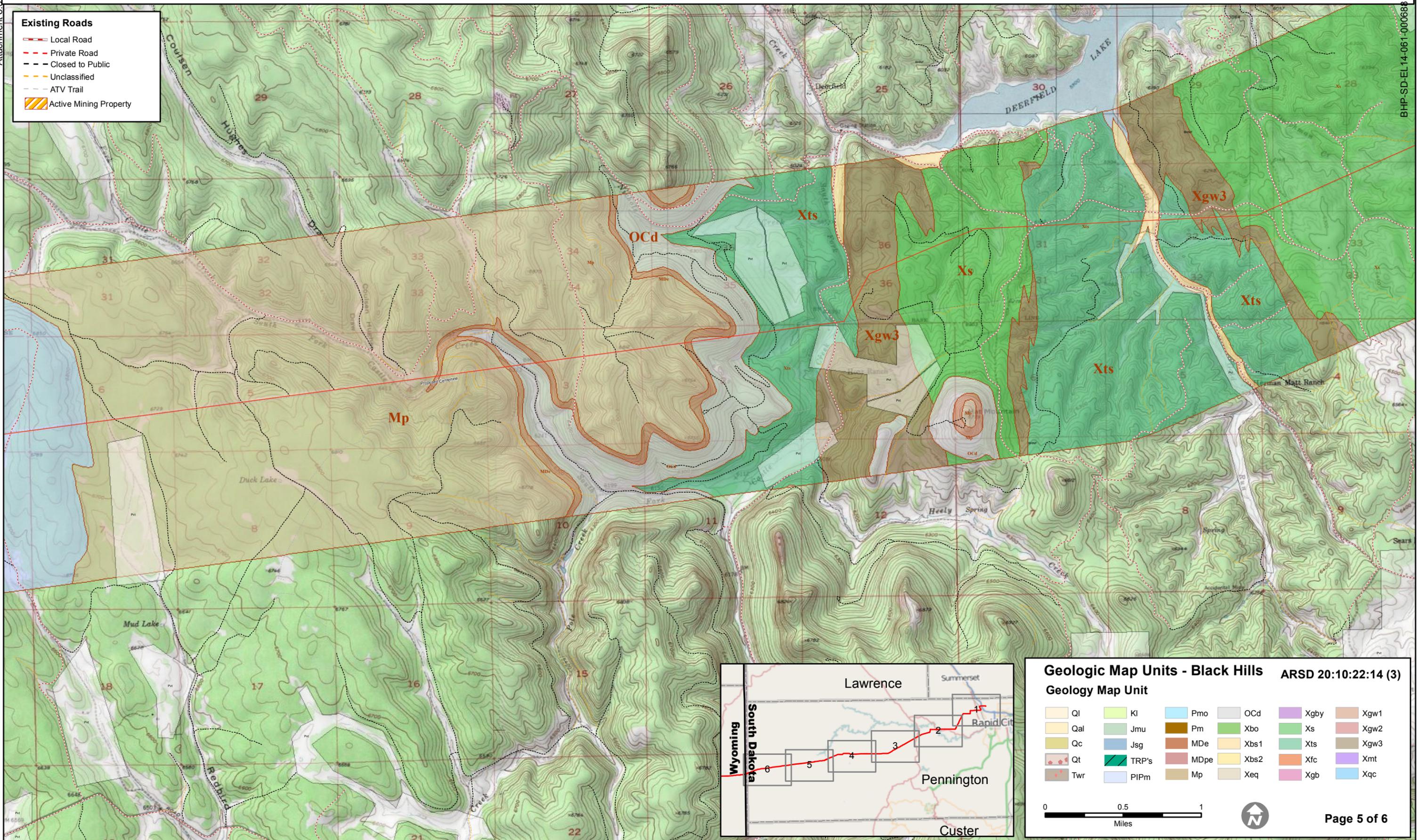
Page 4 of 6

Attachment 8.3

BHP-SD-EL 14-061-000688

Existing Roads

- Local Road
- Private Road
- Closed to Public
- Unclassified
- ATV Trail
- Active Mining Property



Geologic Map Units - Black Hills ARSD 20:10:22:14 (3)

Geology Map Unit

Ql	Kl	Pmo	OCd	Xgby	Xgw1
Qal	Jmu	Pm	Xbo	Xs	Xgw2
Qc	Jsg	MDpe	Xbs1	Xts	Xgw3
Qt	TRP's	Mp	Xbs2	Xfc	Xmt
Twr	PIPm	Xeq	Xgb	Xqc	

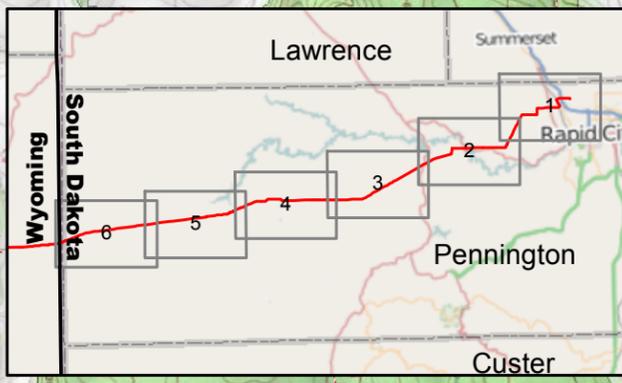
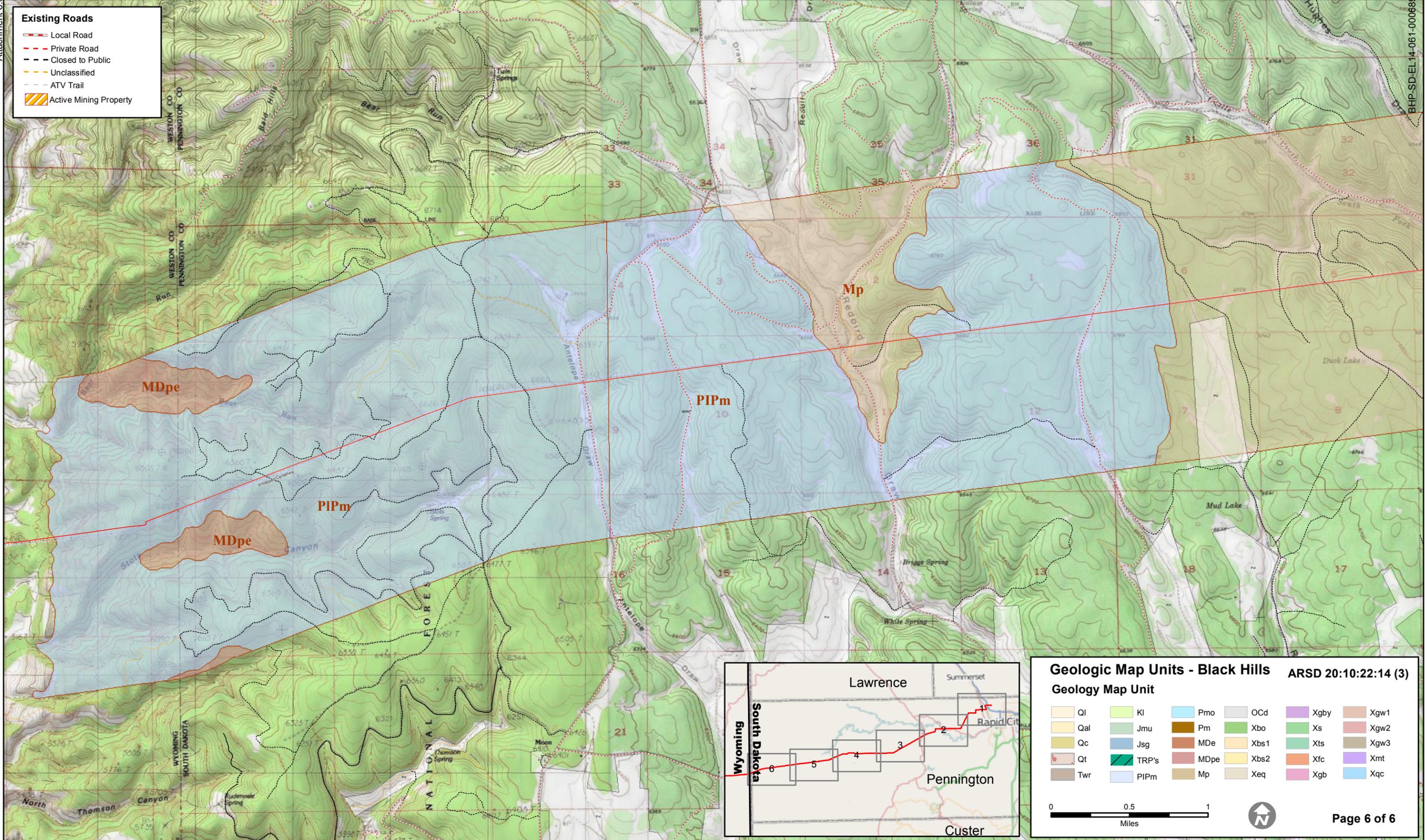
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Miles

Page 5 of 6

Attachment 8.3

Existing Roads

- Local Road
- Private Road
- Closed to Public
- Unclassified
- ATV Trail
- Active Mining Property

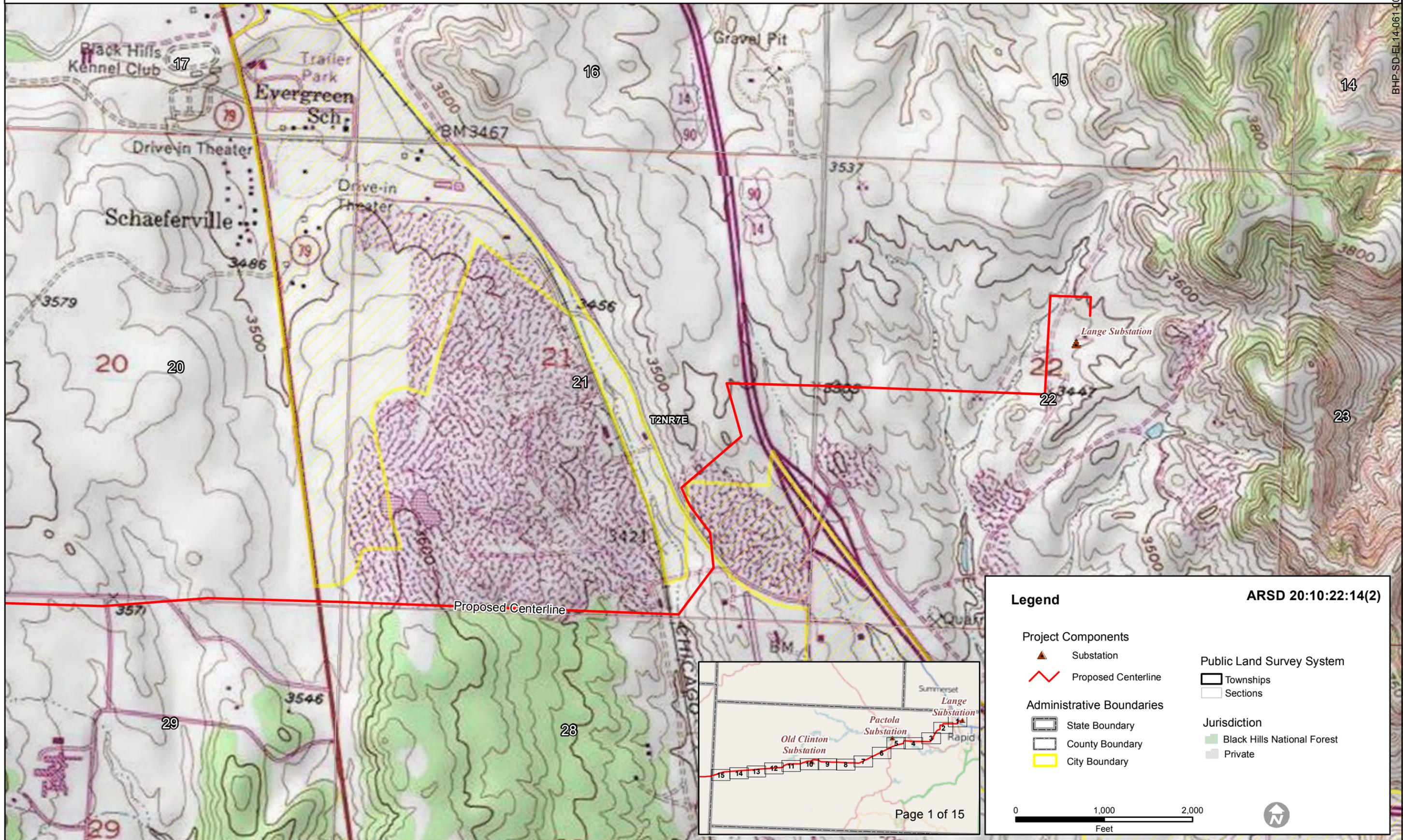


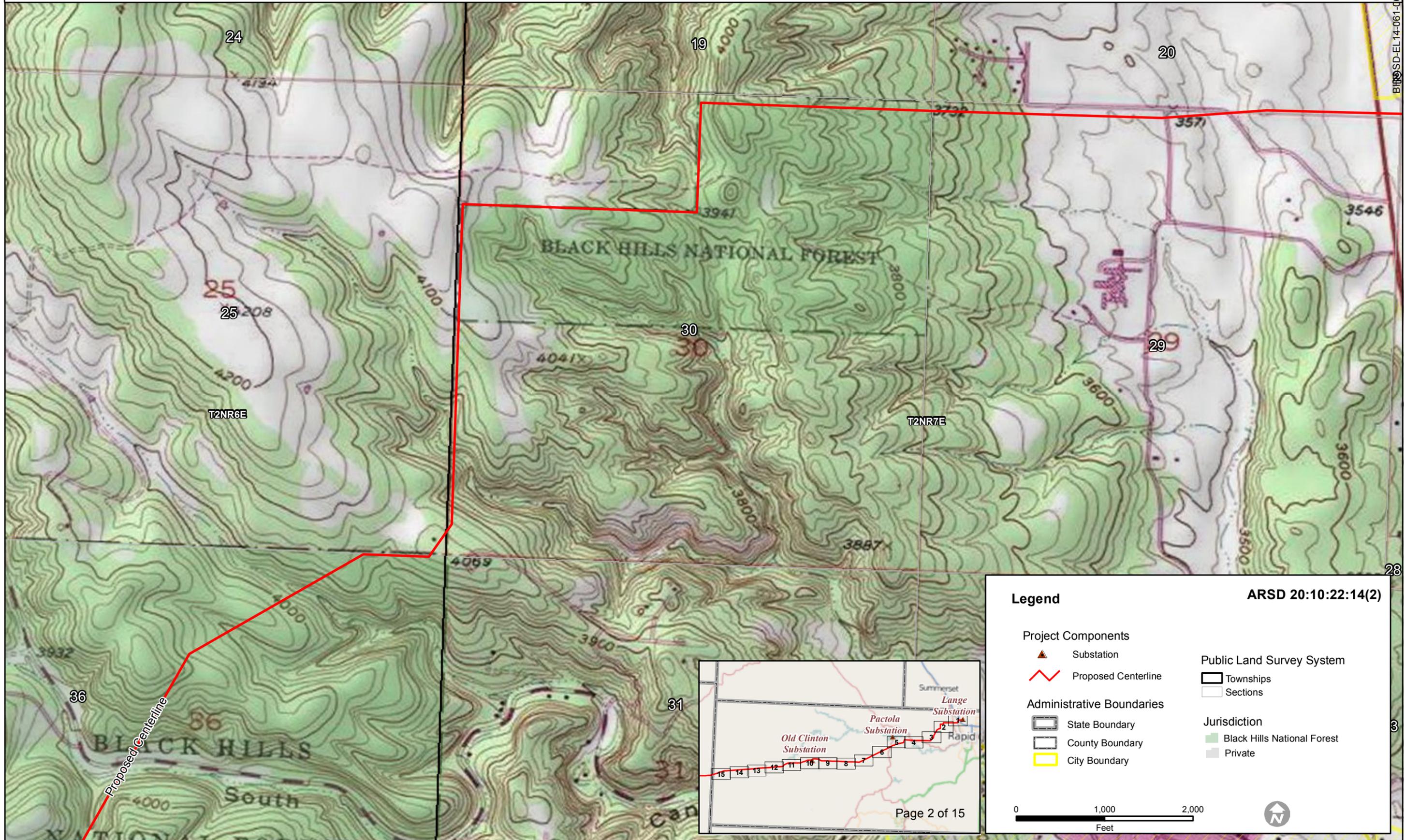
Geologic Map Units - Black Hills ARSD 20:10:22:14 (3)

Geology Map Unit

Ql	Kl	Pmo	OCd	Xgby	Xgw1
Qal	Jmu	Pm	Xbo	Xs	Xgw2
Qc	Jsg	MDe	Xbs1	Xts	Xgw3
Qt	TRP's	MDpe	Xbs2	Xfc	Xmt
Twr	PIPm	Mp	Xeq	Xgb	Xqc

0 0.5 1
Miles



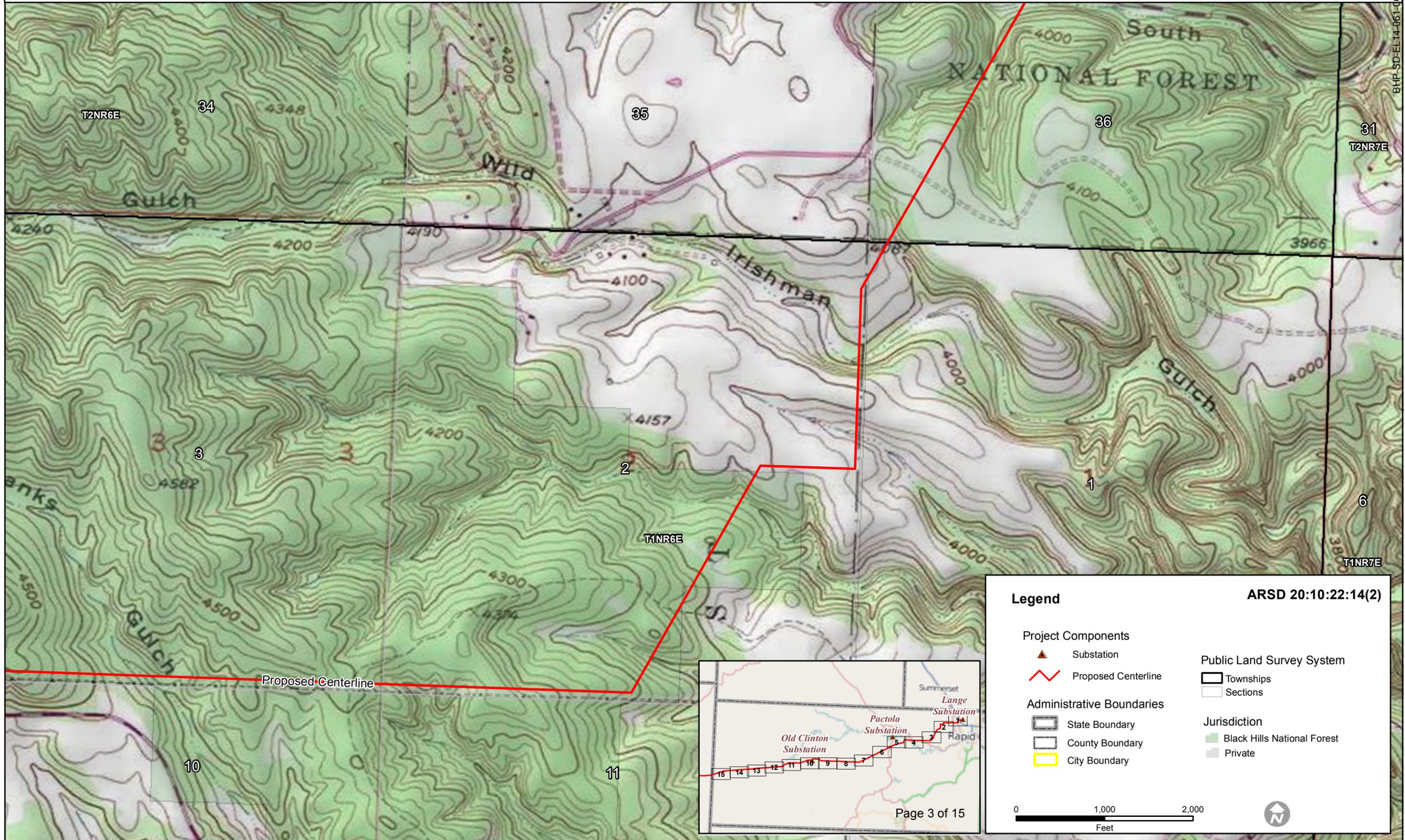


Legend ARSD 20:10:22:14(2)

Project Components		Public Land Survey System	
	Substation		Townships
	Proposed Centerline		Sections
Administrative Boundaries		Jurisdiction	
	State Boundary		Black Hills National Forest
	County Boundary		Private
	City Boundary		

0 1,000 2,000
 Feet

Page 2 of 15



Legend ARSD 20:10:22:14(2)

Project Components		Public Land Survey System	
	Substation		Townships
	Proposed Centerline		Sections
Administrative Boundaries		Jurisdiction	
	State Boundary		Black Hills National Forest
	County Boundary		Private
	City Boundary		

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Feet

Page 3 of 15

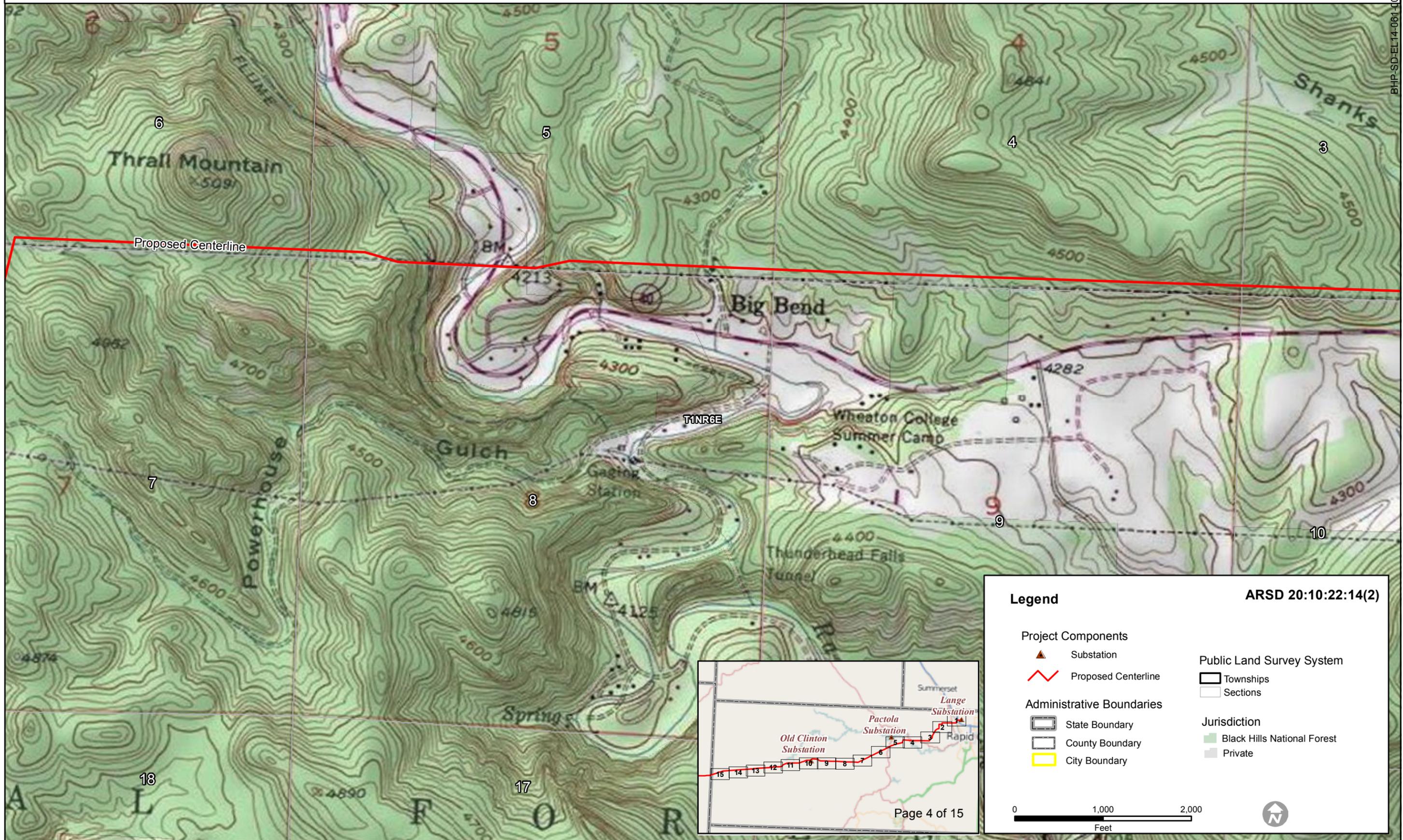
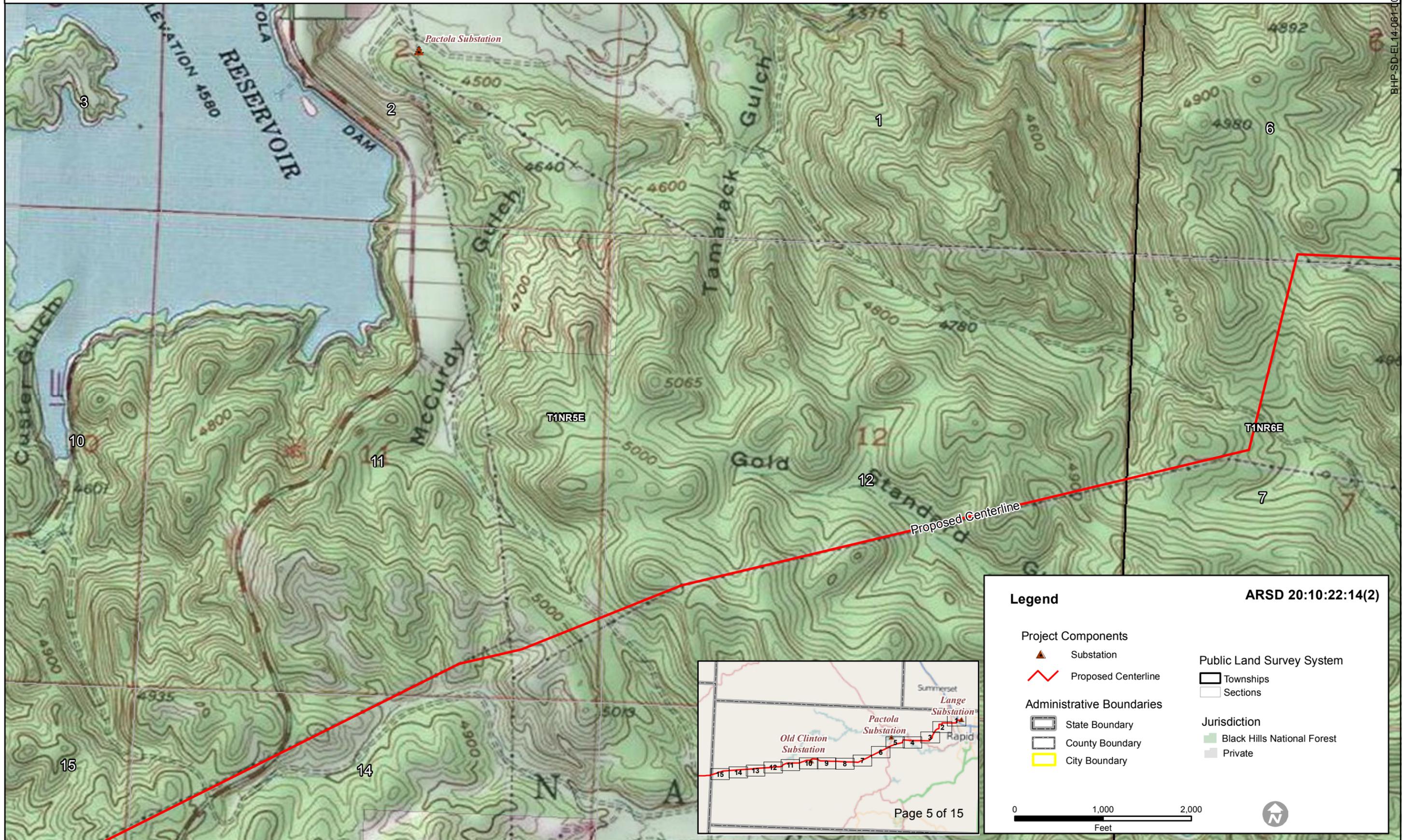


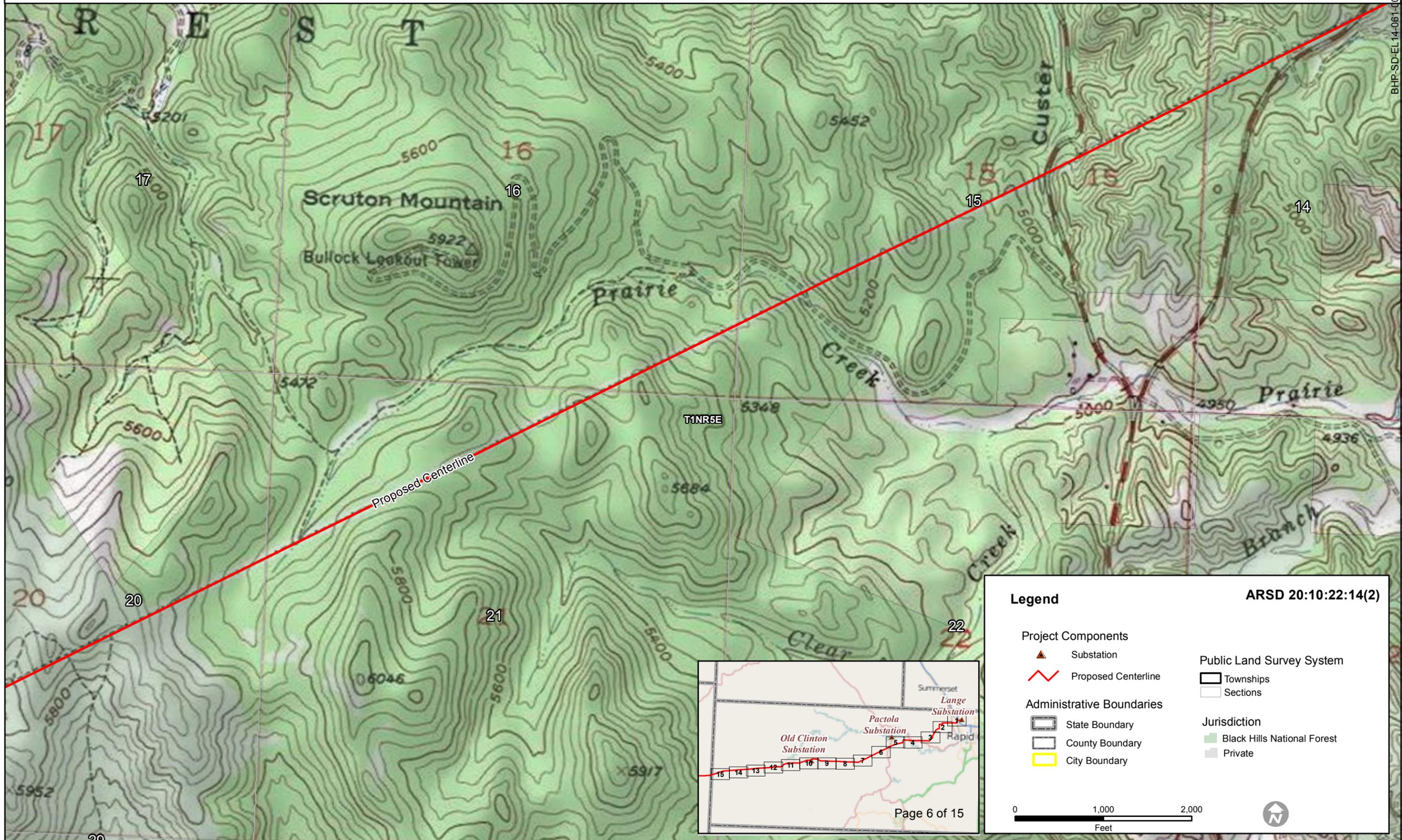
Figure 5 - Physical Environment

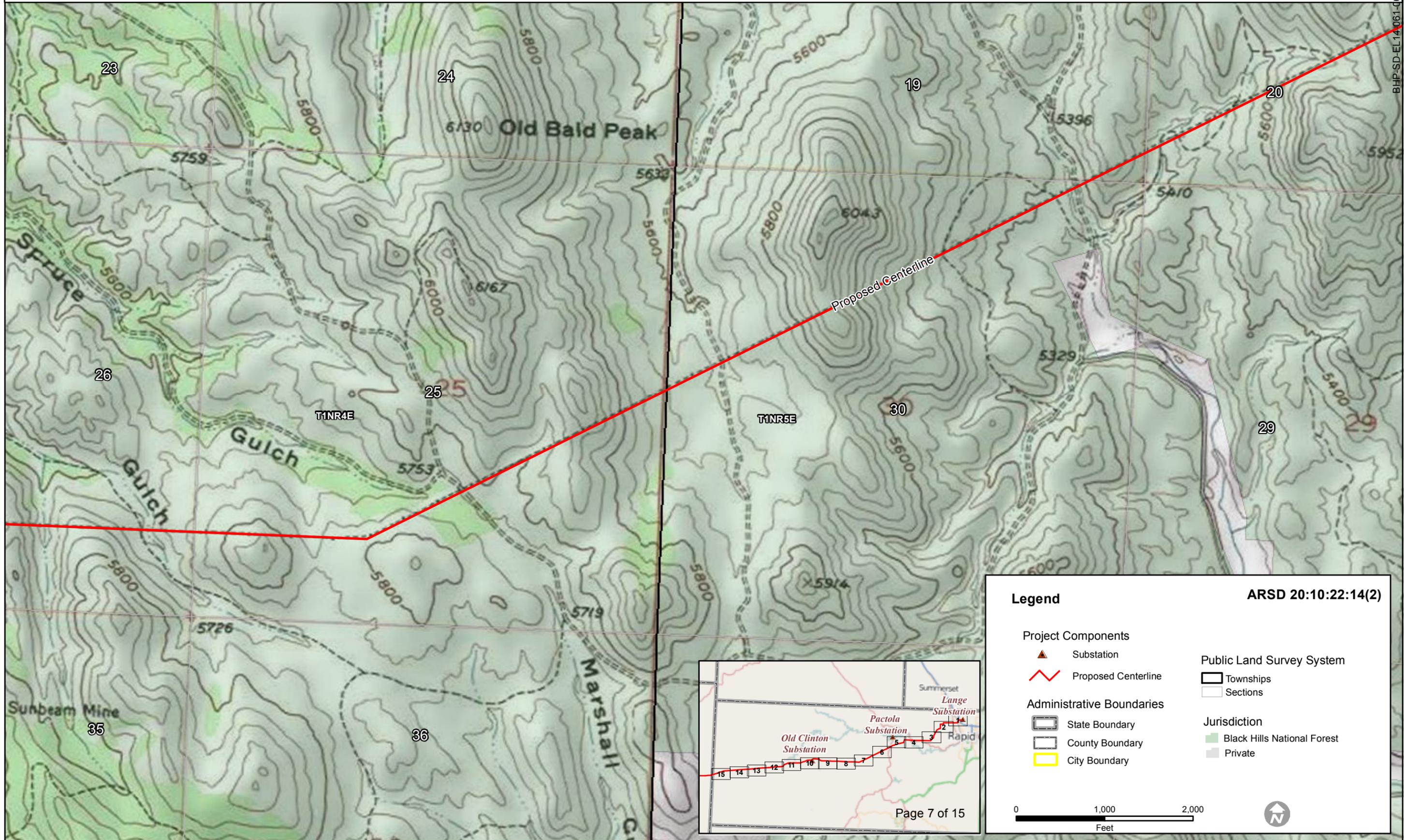
230 kV Transmission Line

Attachment 8.4

BHP-SD-EL-14-061-00694





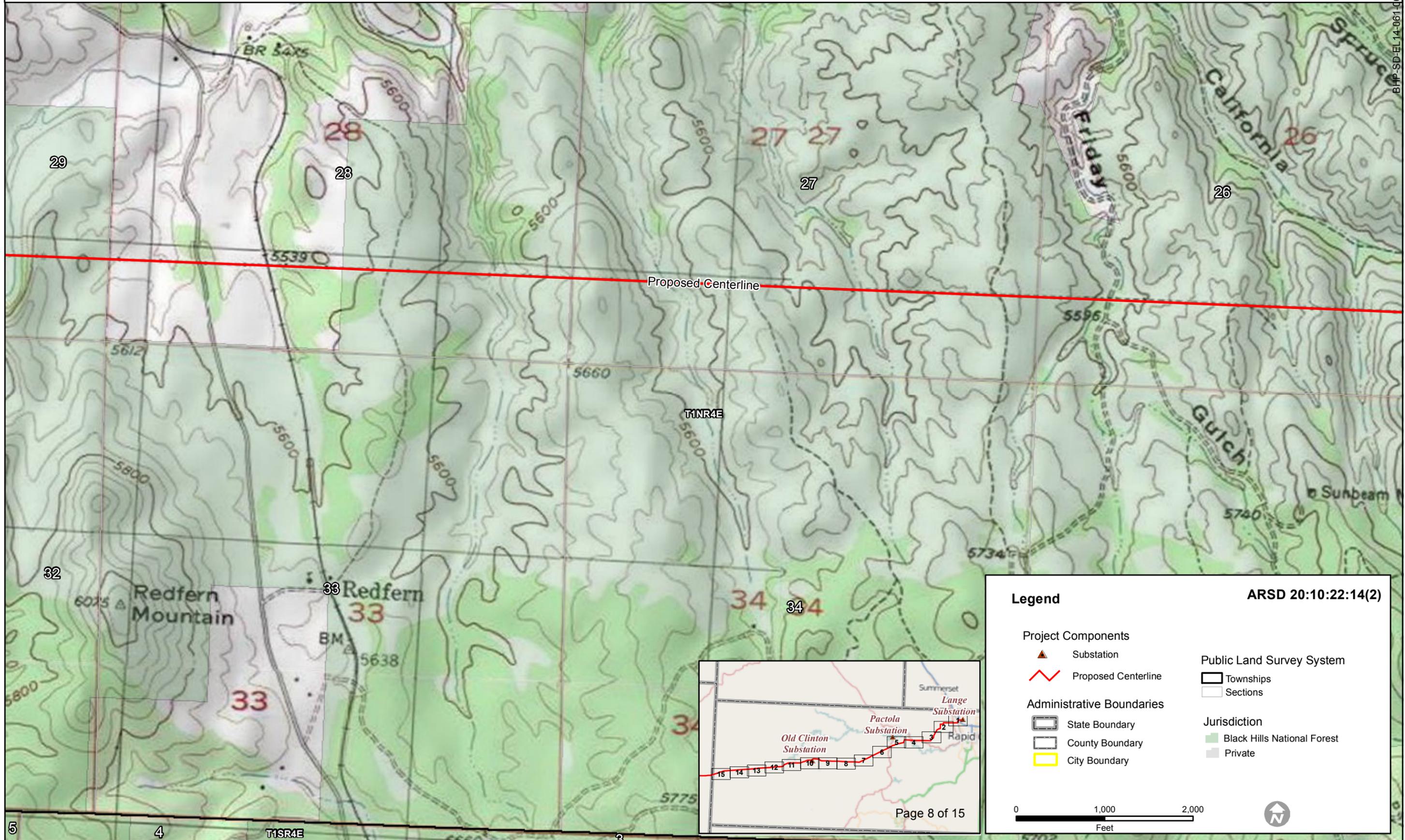


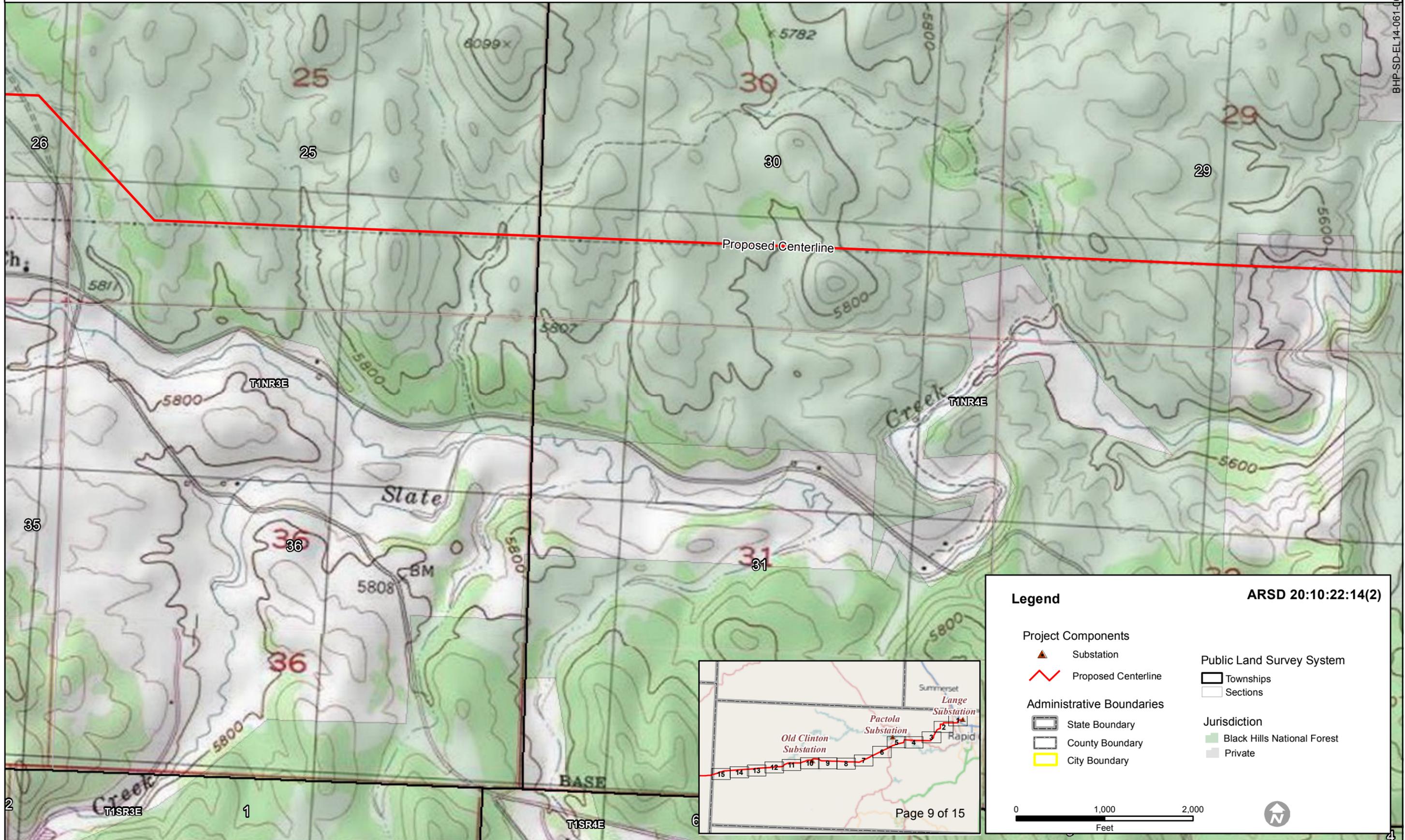
Legend ARSD 20:10:22:14(2)

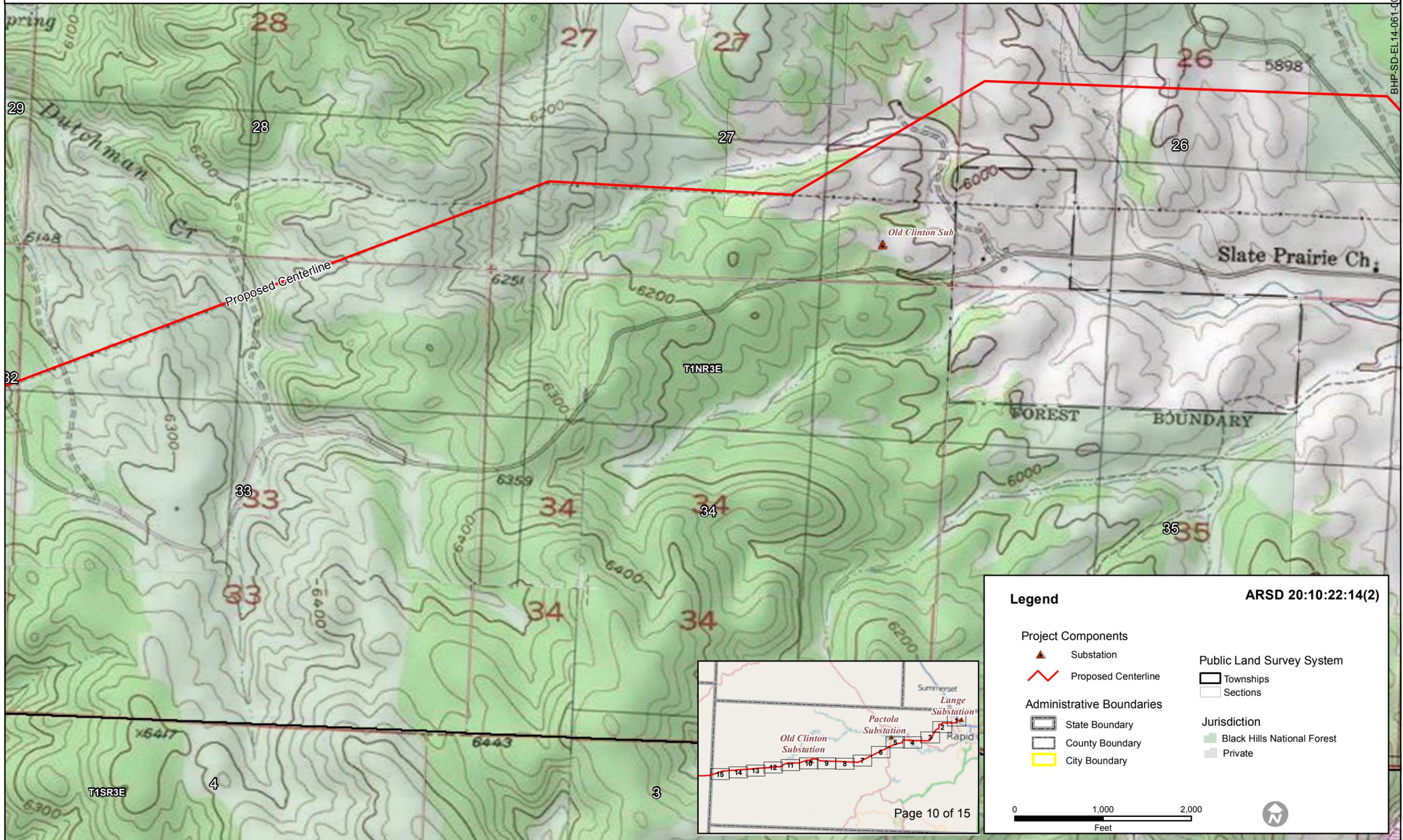
Project Components		Public Land Survey System	
▲	Substation	▭	Townships
—	Proposed Centerline	▭	Sections
Administrative Boundaries		Jurisdiction	
▭	State Boundary	▭	Black Hills National Forest
▭	County Boundary	▭	Private
▭	City Boundary		

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Feet

Page 7 of 15





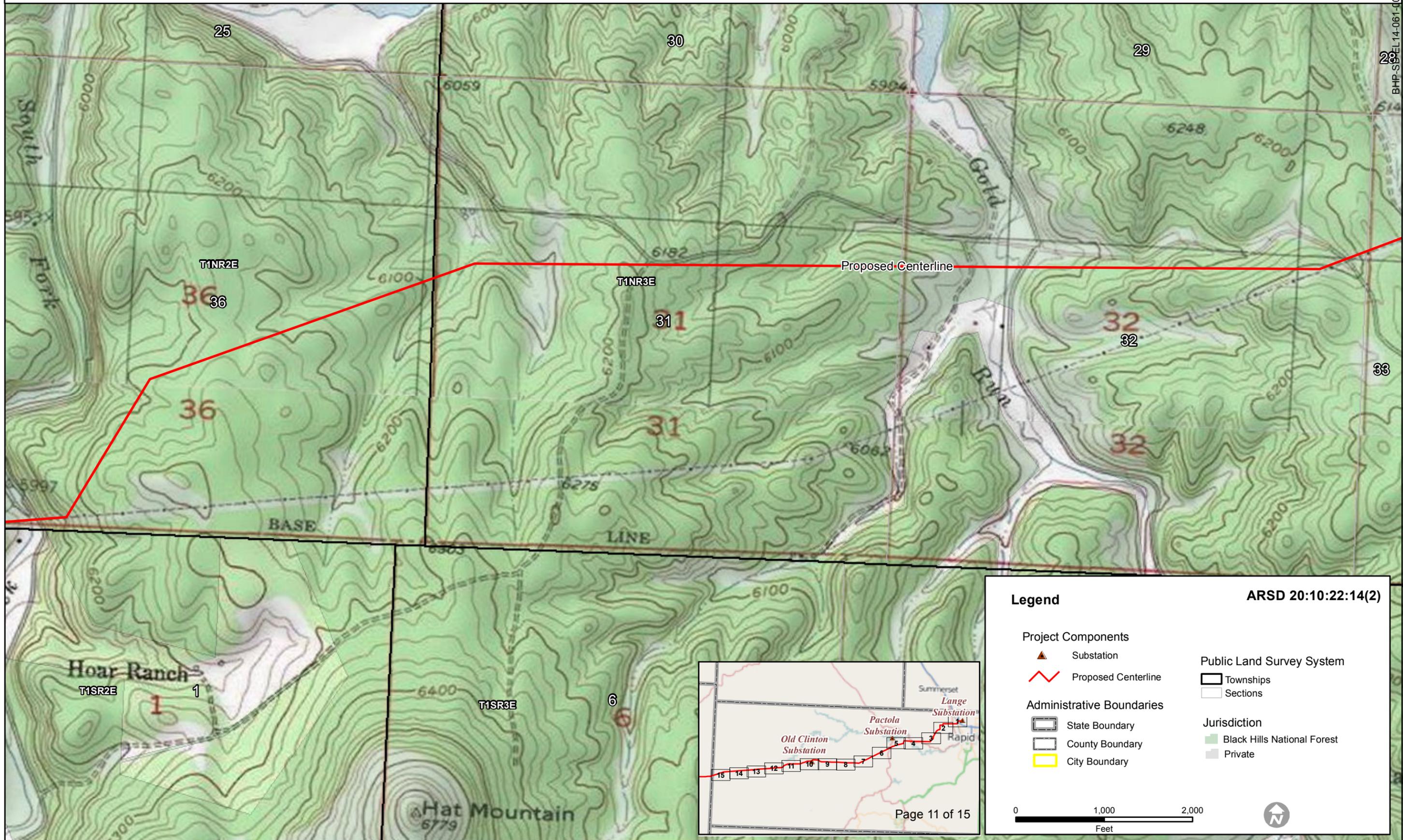


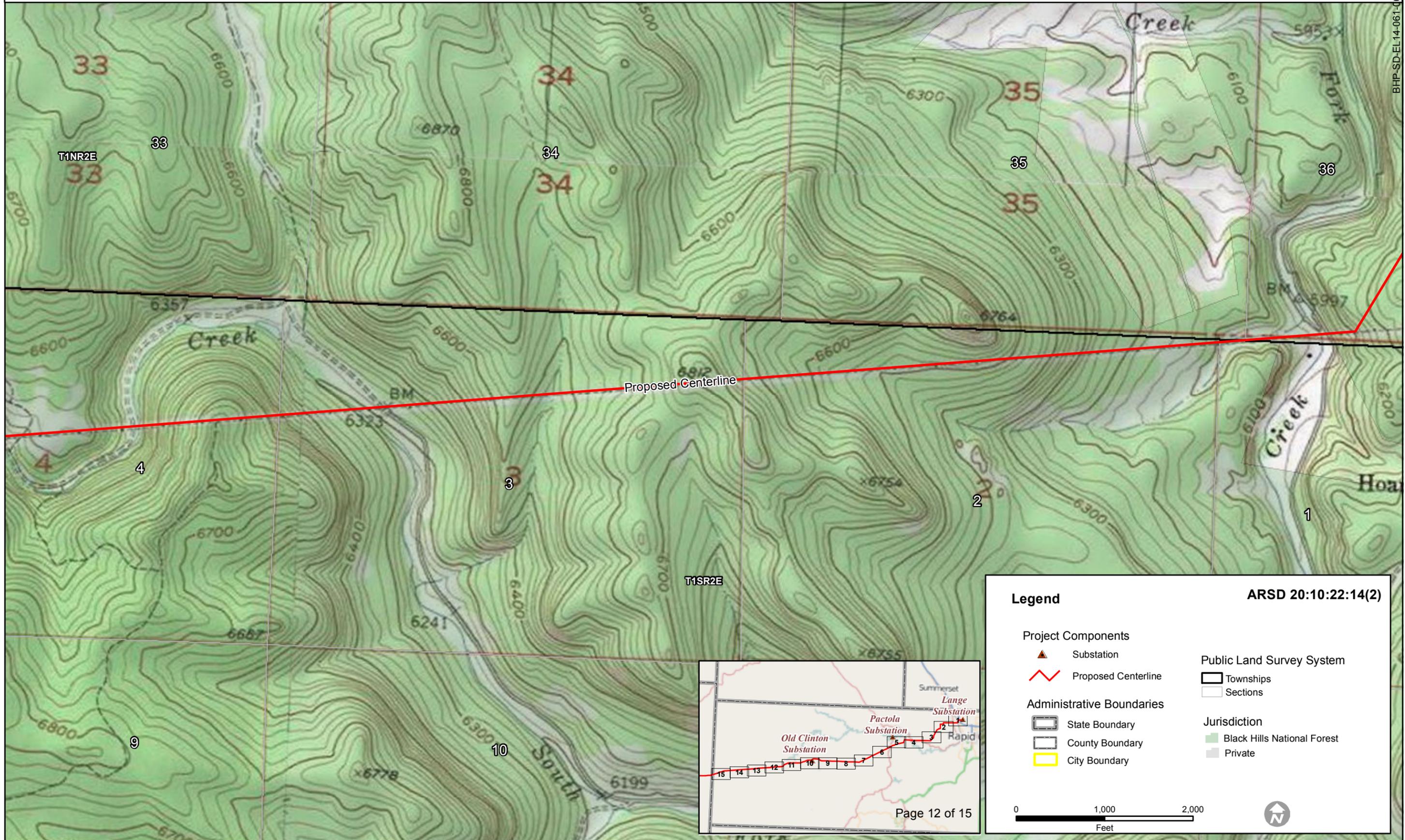
Legend ARSD 20:10:22:14(2)

Project Components	Public Land Survey System
▲ Substation	▭ Townships
↗ Proposed Centerline	▭ Sections
Administrative Boundaries	Jurisdiction
▭ State Boundary	■ Black Hills National Forest
▭ County Boundary	■ Private
▭ City Boundary	

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Feet

Page 10 of 15



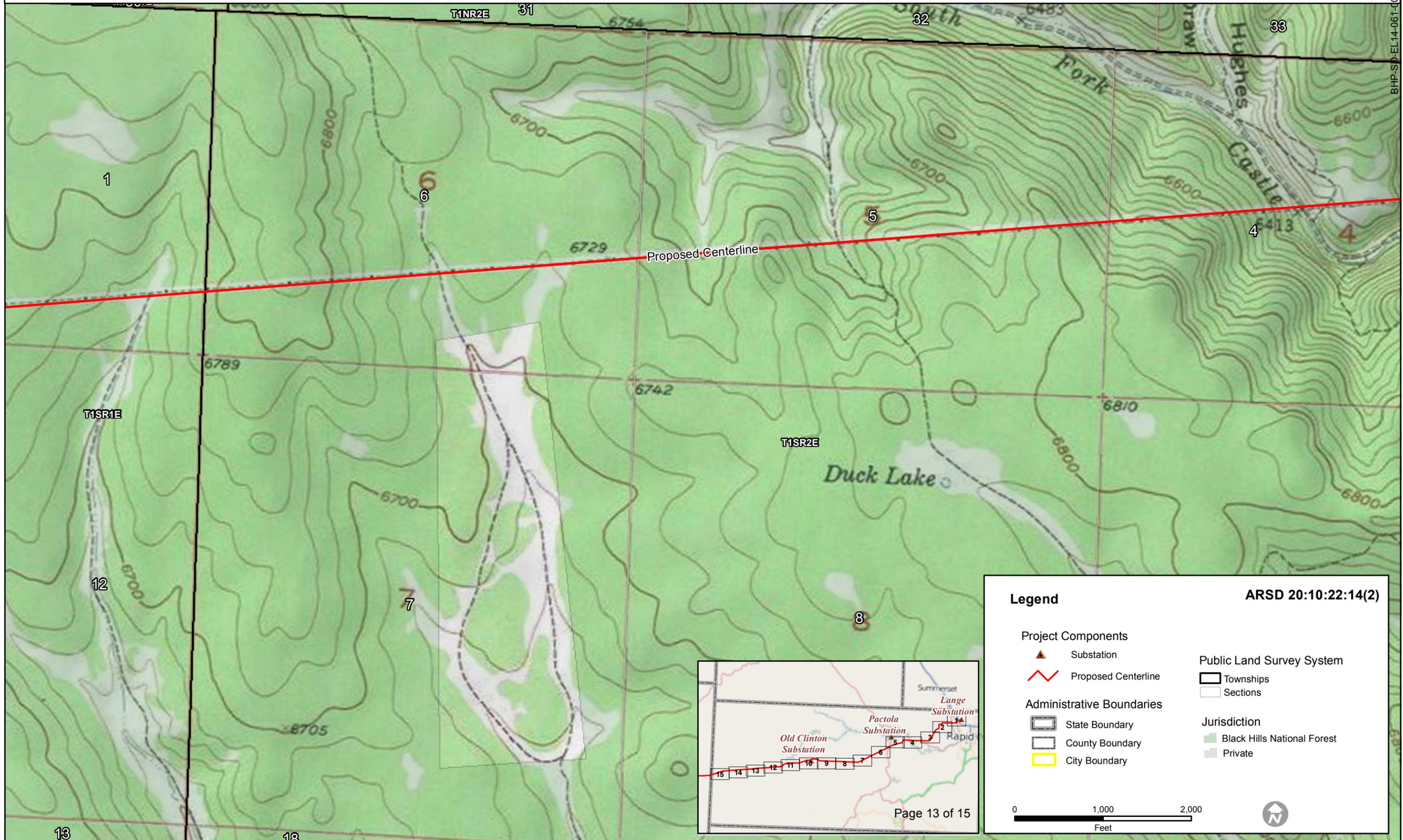


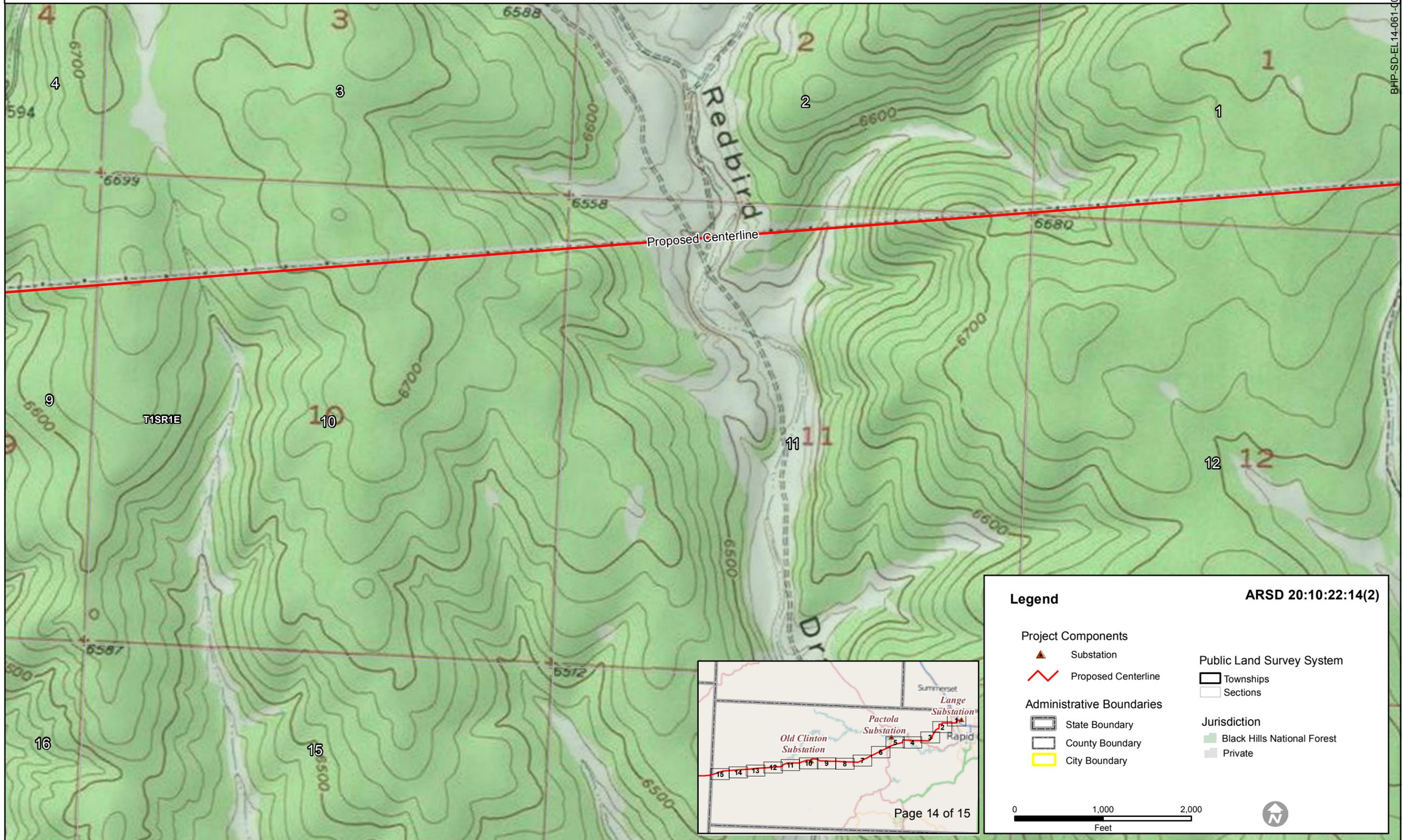
Legend ARSD 20:10:22:14(2)

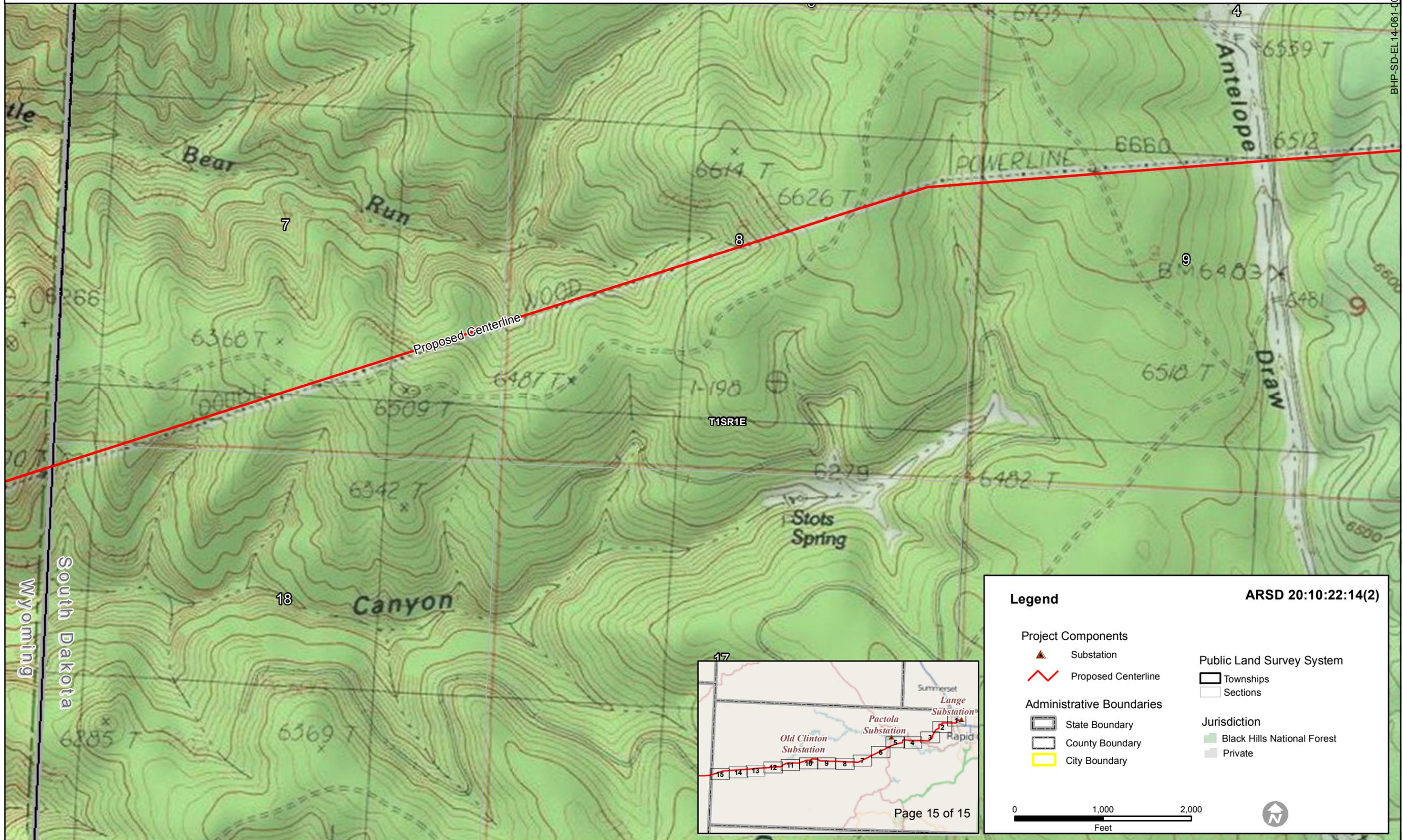
Project Components		Public Land Survey System	
	Substation		Townships
	Proposed Centerline		Sections
Administrative Boundaries		Jurisdiction	
	State Boundary		Black Hills National Forest
	County Boundary		Private
	City Boundary		

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Feet

Page 12 of 15







Legend ARSD 20:10:22:14(2)

Project Components	Public Land Survey System
▲ Substation	▭ Townships
— Proposed Centerline	▭ Sections
Administrative Boundaries	Jurisdiction
▭ State Boundary	■ Black Hills National Forest
▭ County Boundary	■ Private
▭ City Boundary	

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Feet

Page 15 of 15

BLACK HILLS POWER, INC.
SD PUC DOCKET: EL14-061

REQUEST DATE : August 21, 2014

RESPONSE DATE : October 3, 2014

REQUESTING PARTY: SDPUC Staff

SDPUC Request No. 13:

Per ARSD 20:10:22:15(1), please provide water drainage patterns, including the direction of flow on the higher resolution maps provided per *Q5*.

Response to SDPUC Request No. 13:

Please see Attachment 13.

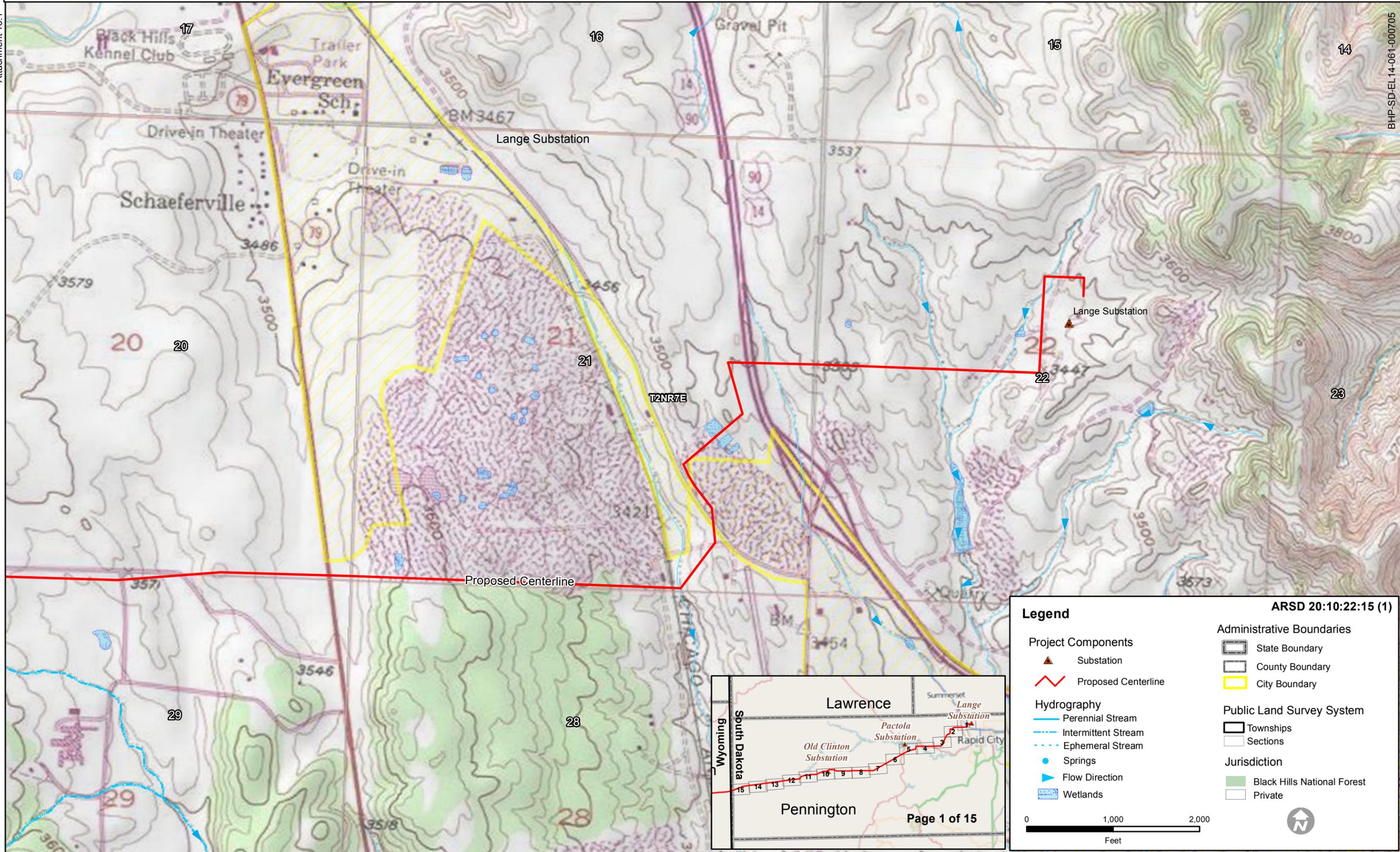
Supplemental Response to SDPUC Request No. 13:

The final route is reflected in Attachment 13.1 – Revised Surface Water.

Attachments: Attachment 13.1 – Revised Surface Water

Attachment 13.1

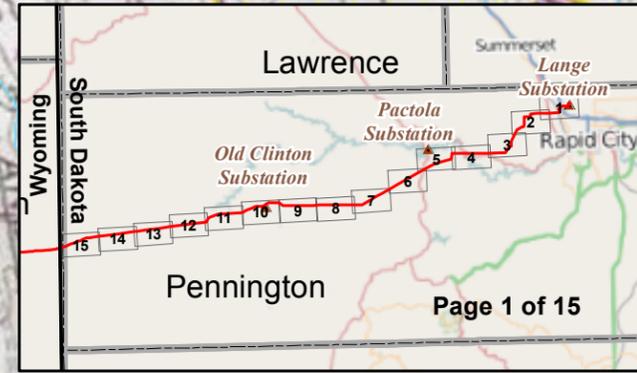
BHP-SD-EL 14-061-000705



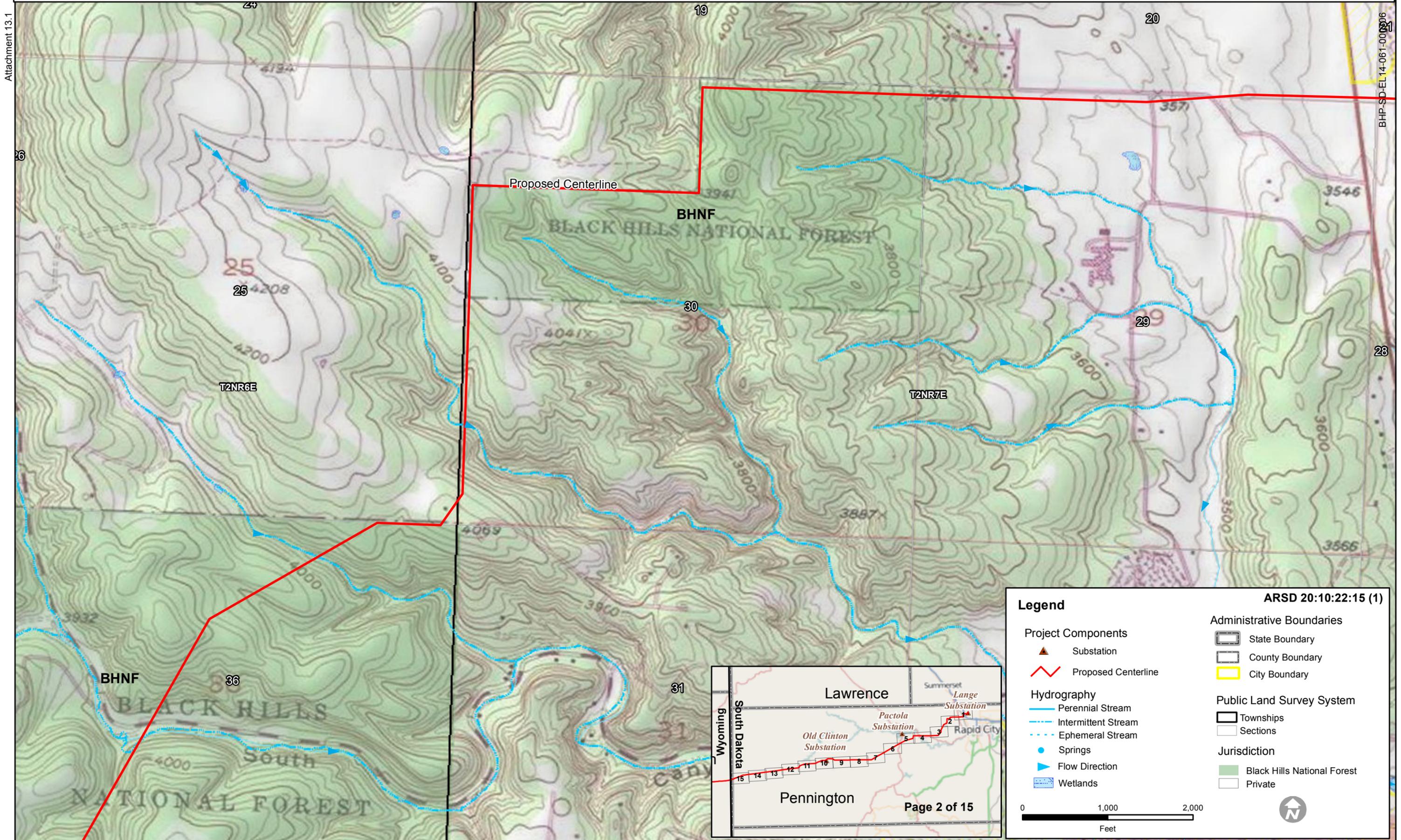
Legend ARSD 20:10:22:15 (1)

<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Hydrography</p> <ul style="list-style-type: none"> Perennial Stream Intermittent Stream Ephemeral Stream Springs Flow Direction Wetlands 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections <p>Jurisdiction</p> <ul style="list-style-type: none"> Black Hills National Forest Private
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Feet



Attachment 13.1



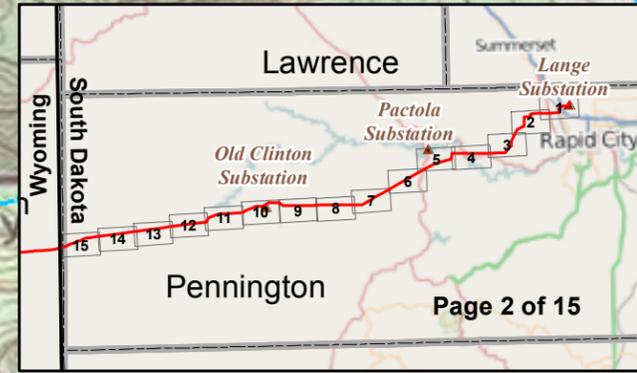
Legend

Project Components	Administrative Boundaries
▲ Substation	▭ State Boundary
↗ Proposed Centerline	▭ County Boundary
	▭ City Boundary
Hydrography	Public Land Survey System
— Perennial Stream	▭ Townships
- - - Intermittent Stream	▭ Sections
· · · Ephemeral Stream	Jurisdiction
● Springs	▭ Black Hills National Forest
▶ Flow Direction	▭ Private
▭ Wetlands	

ARSD 20:10:22:15 (1)

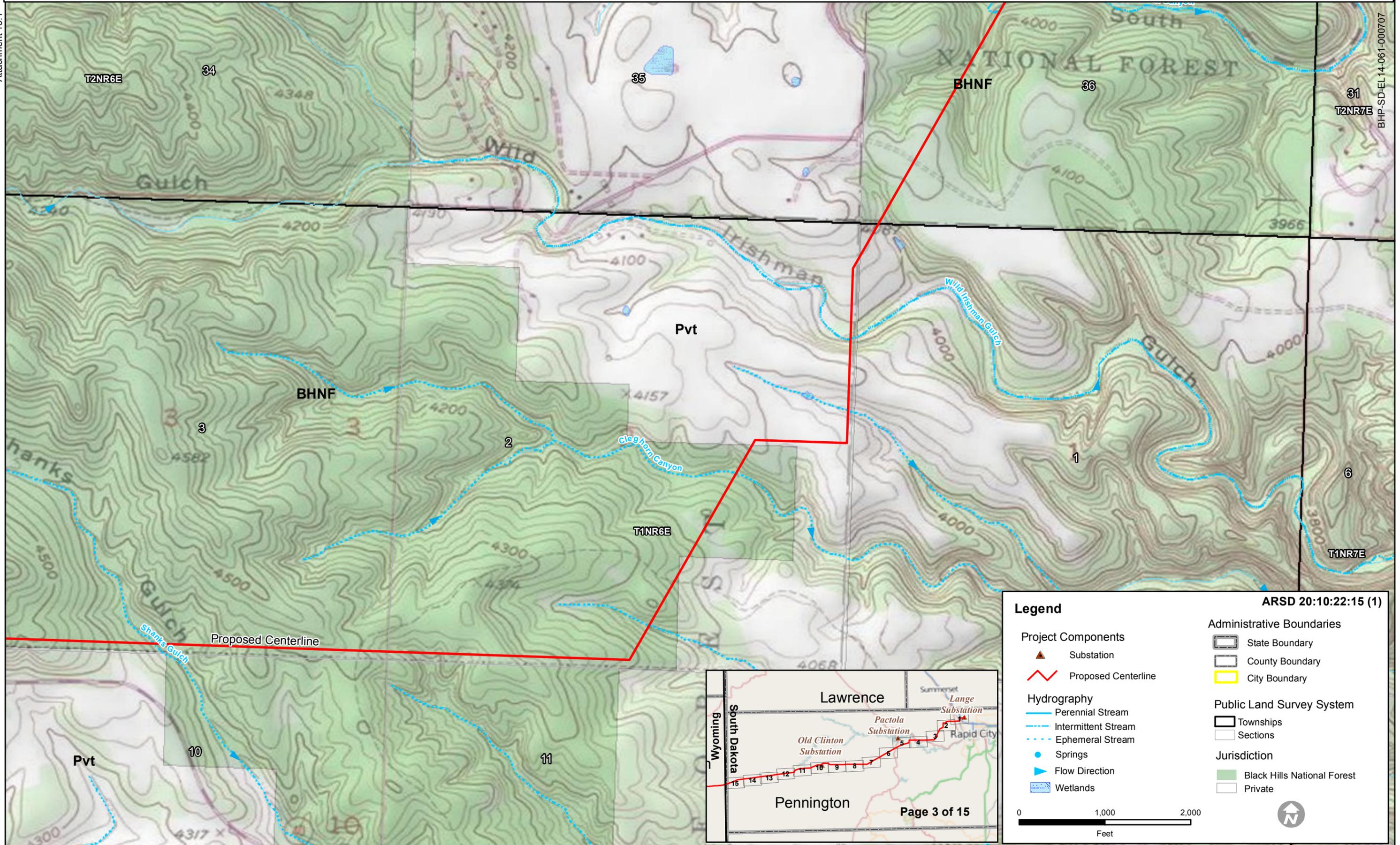
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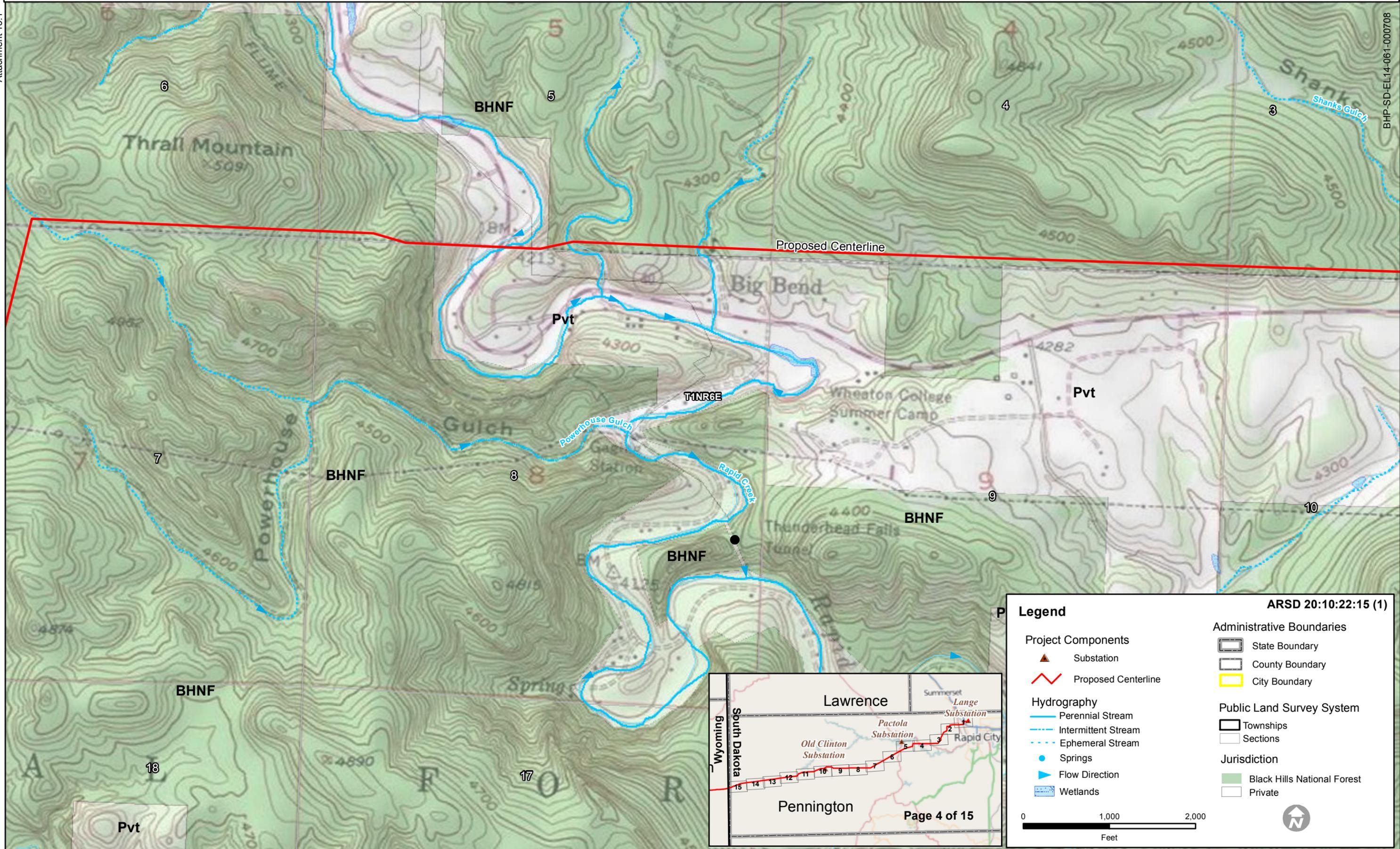
Attachment 13.1

BHP-SD-EL 14-061-000707



Attachment 13.1

BHP-SD-EL-14-061-000708



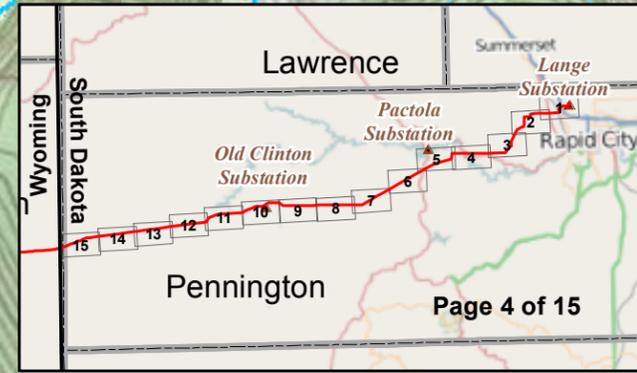
Legend

Project Components	Administrative Boundaries
▲ Substation	▭ State Boundary
— Proposed Centerline	▭ County Boundary
	▭ City Boundary
Hydrography	Public Land Survey System
— Perennial Stream	▭ Townships
- - - Intermittent Stream	▭ Sections
· · · Ephemeral Stream	Jurisdiction
● Springs	▭ Black Hills National Forest
▶ Flow Direction	▭ Private
▭ Wetlands	

ARSD 20:10:22:15 (1)

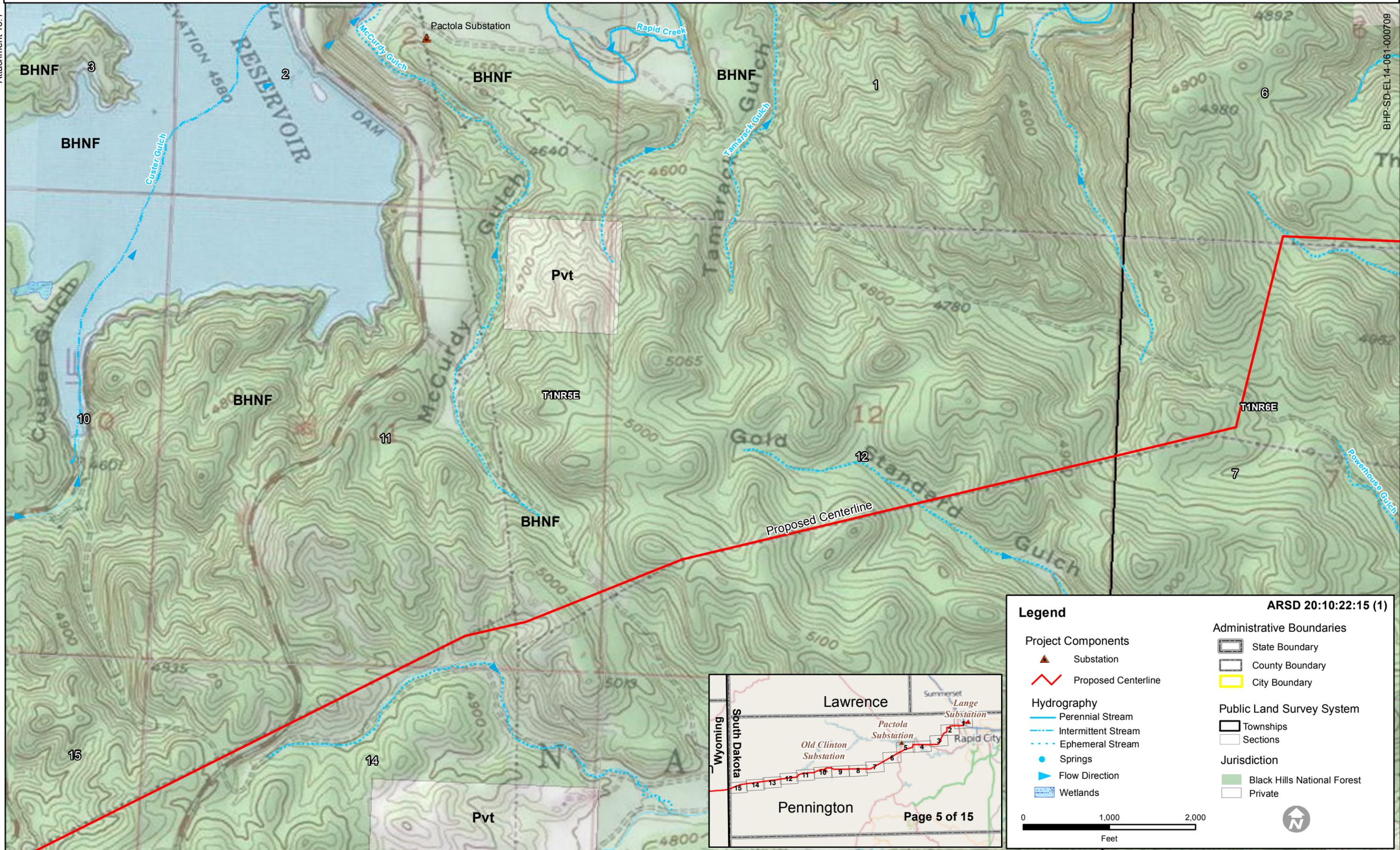
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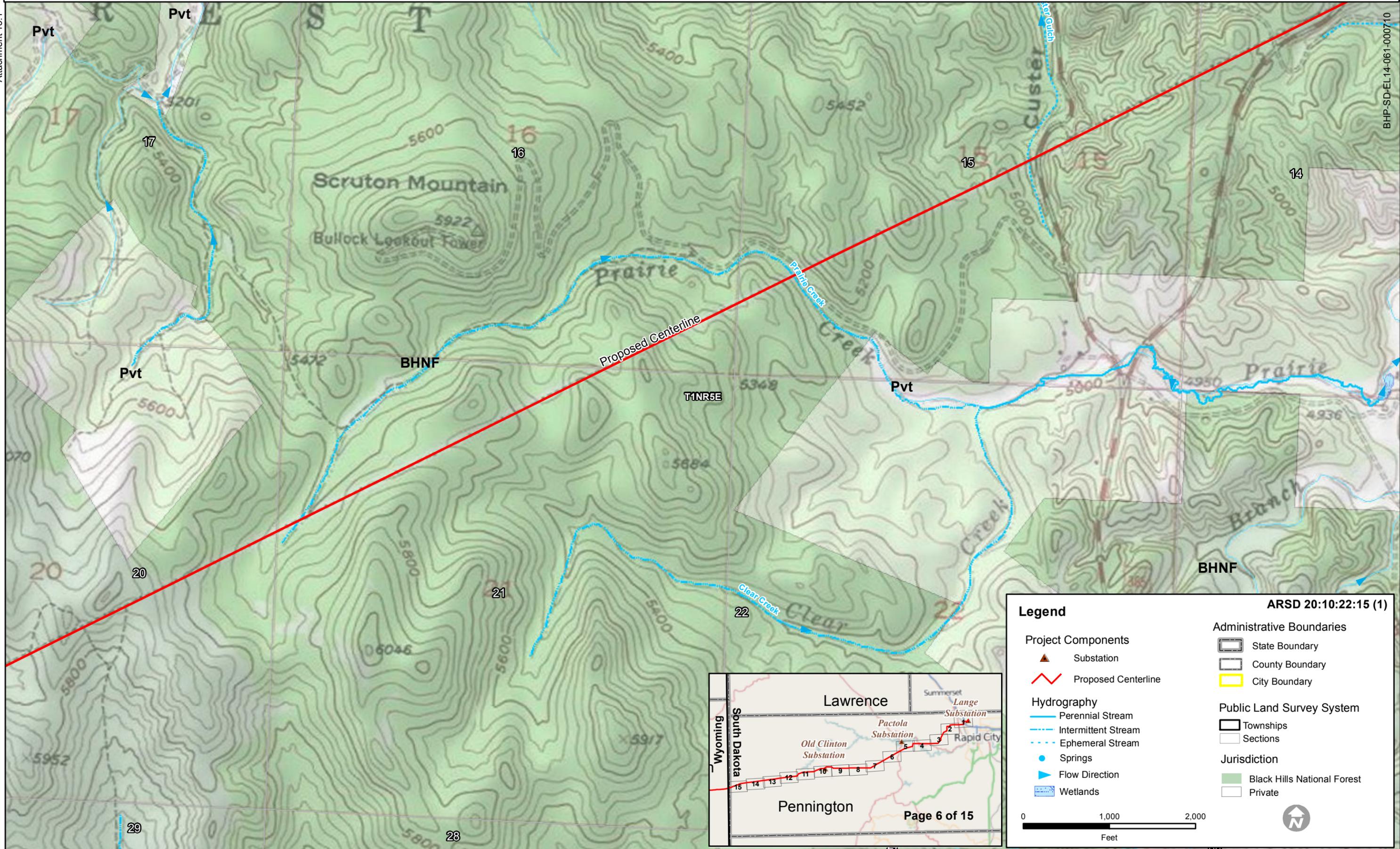
Attachment 13.1

BHP-SD-EL-14-061-000709



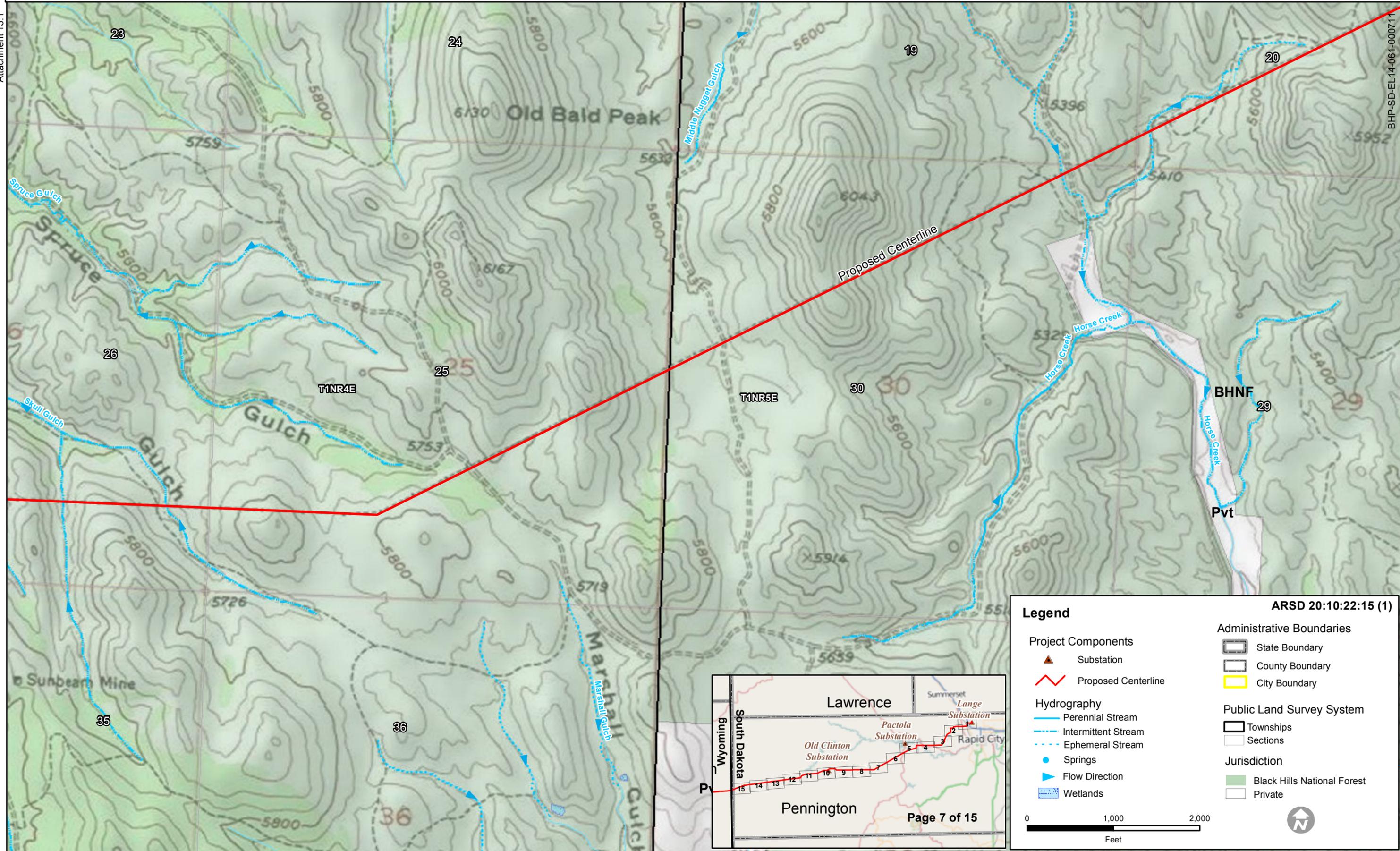
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BHP-SD-EL 14-061-0007.10



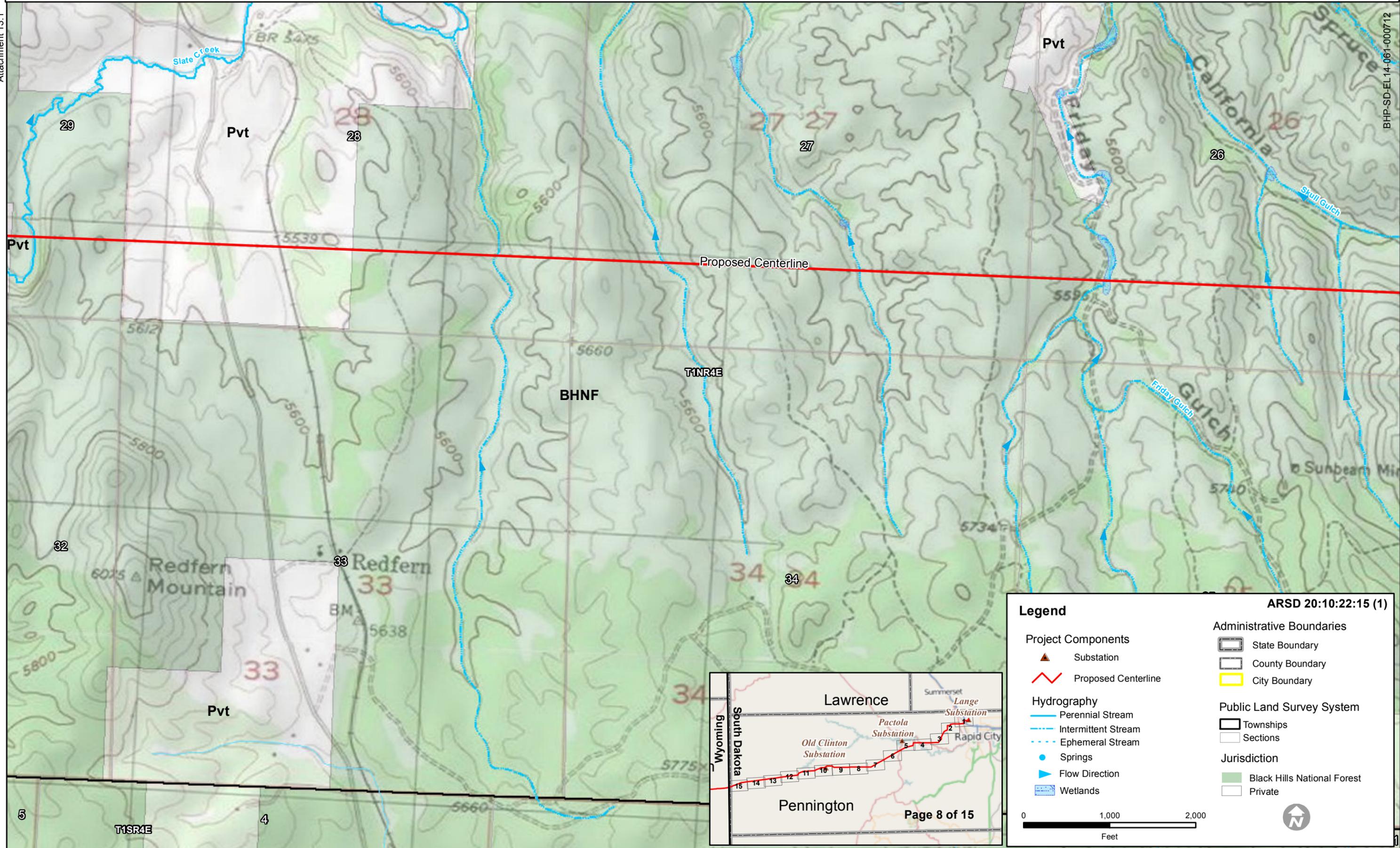
Attachment 13.1

BHP-SD-EL-14-061-0007.11



Attachment 13.1

BHP-SD-EL 14-061-000712



Legend ARSD 20:10:22:15 (1)

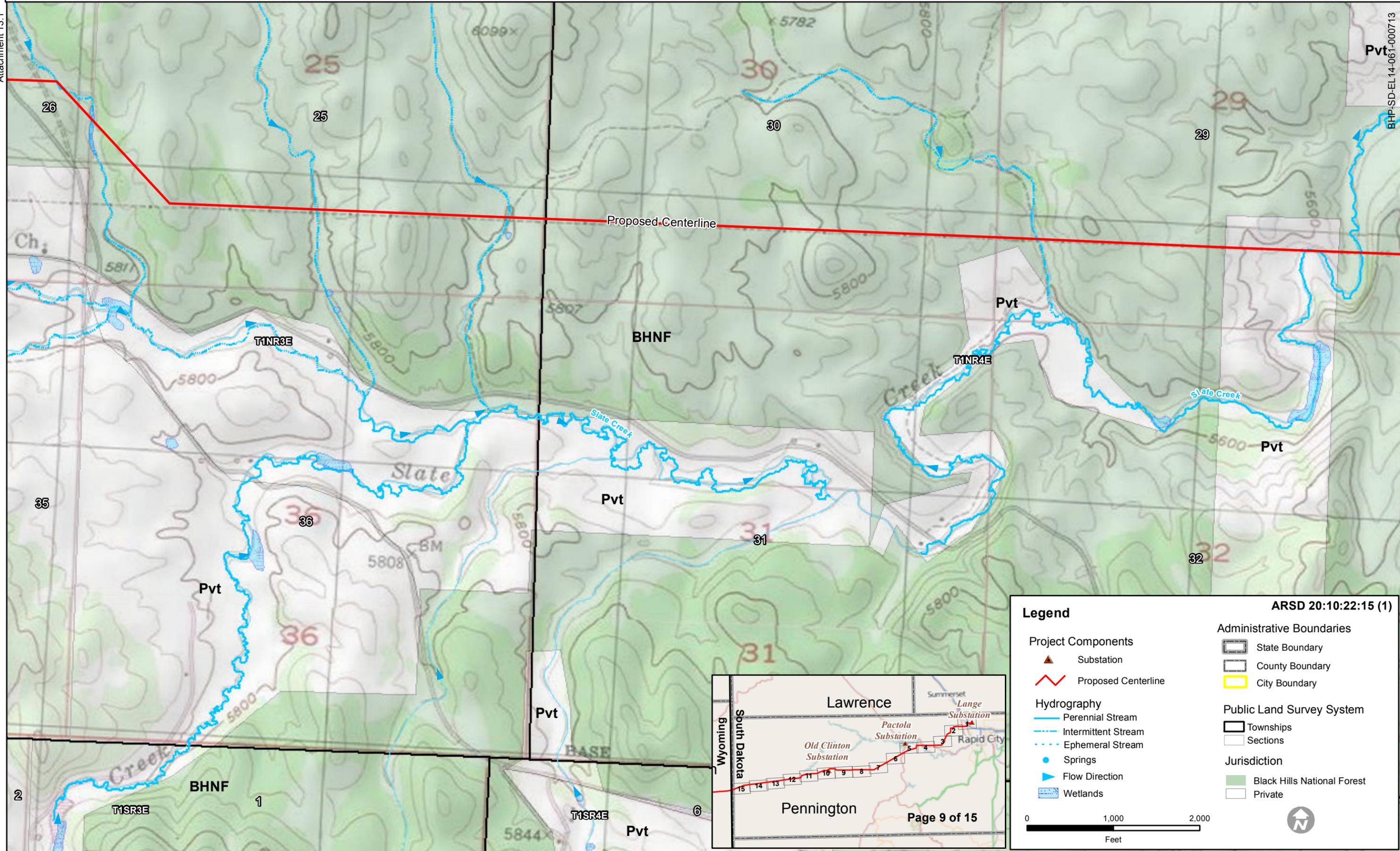
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Feet

Page 8 of 15

Attachment 13.1

BHP-SD-EL 14-061-000713

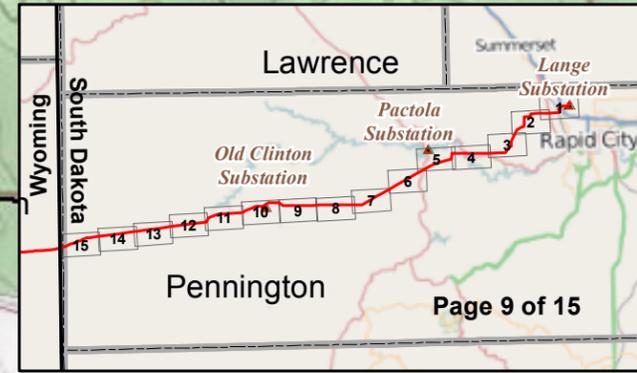


Legend ARSD 20:10:22:15 (1)

<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Hydrography</p> <ul style="list-style-type: none"> Perennial Stream Intermittent Stream Ephemeral Stream Springs Flow Direction Wetlands 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections <p>Jurisdiction</p> <ul style="list-style-type: none"> Black Hills National Forest Private
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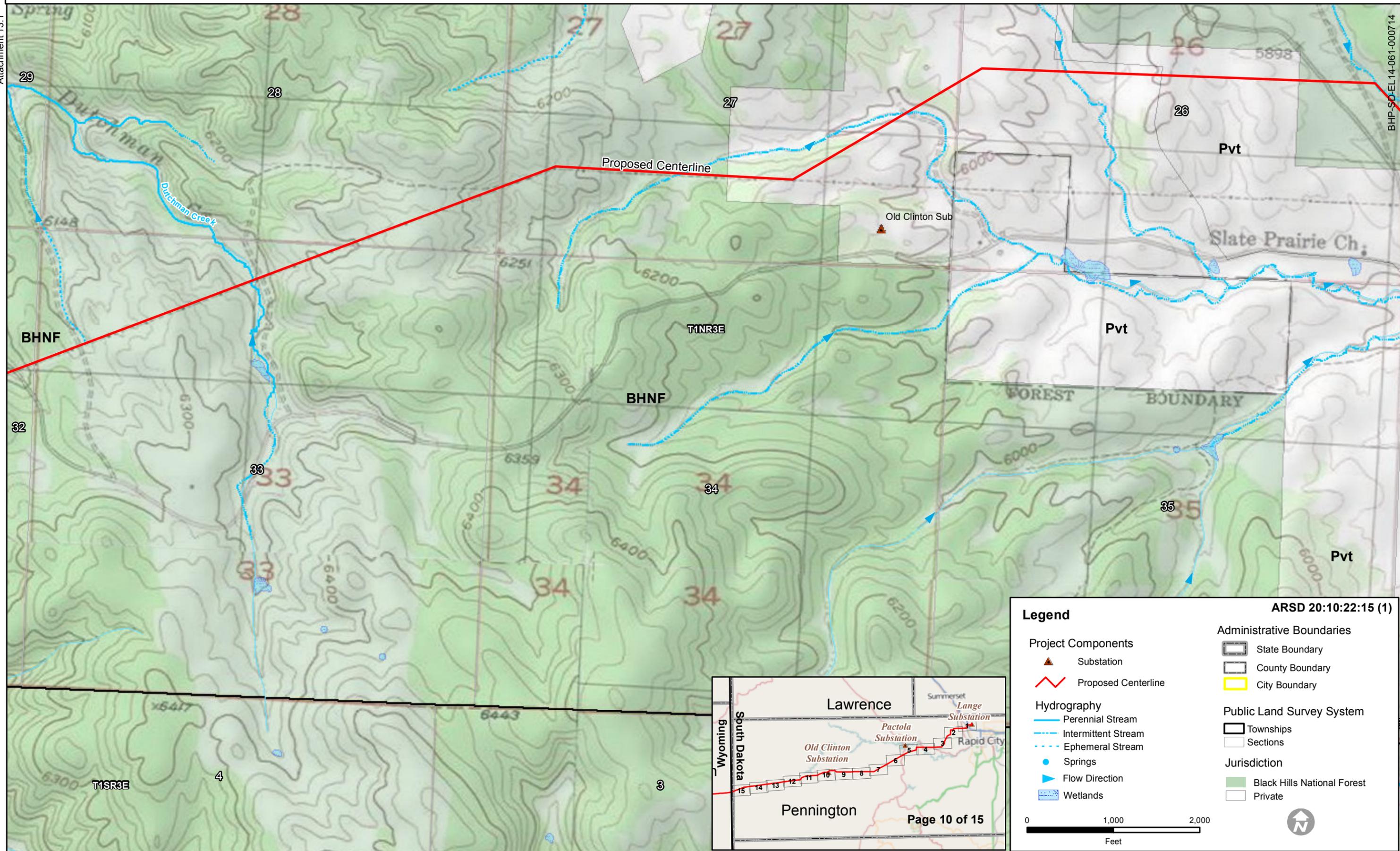
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Attachment 13.1

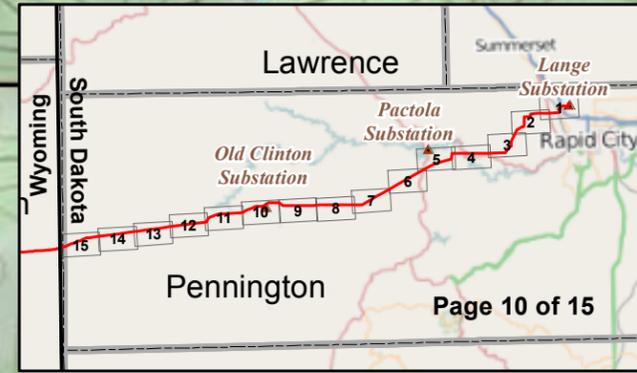
BHP-SD-EL 14-061-000714



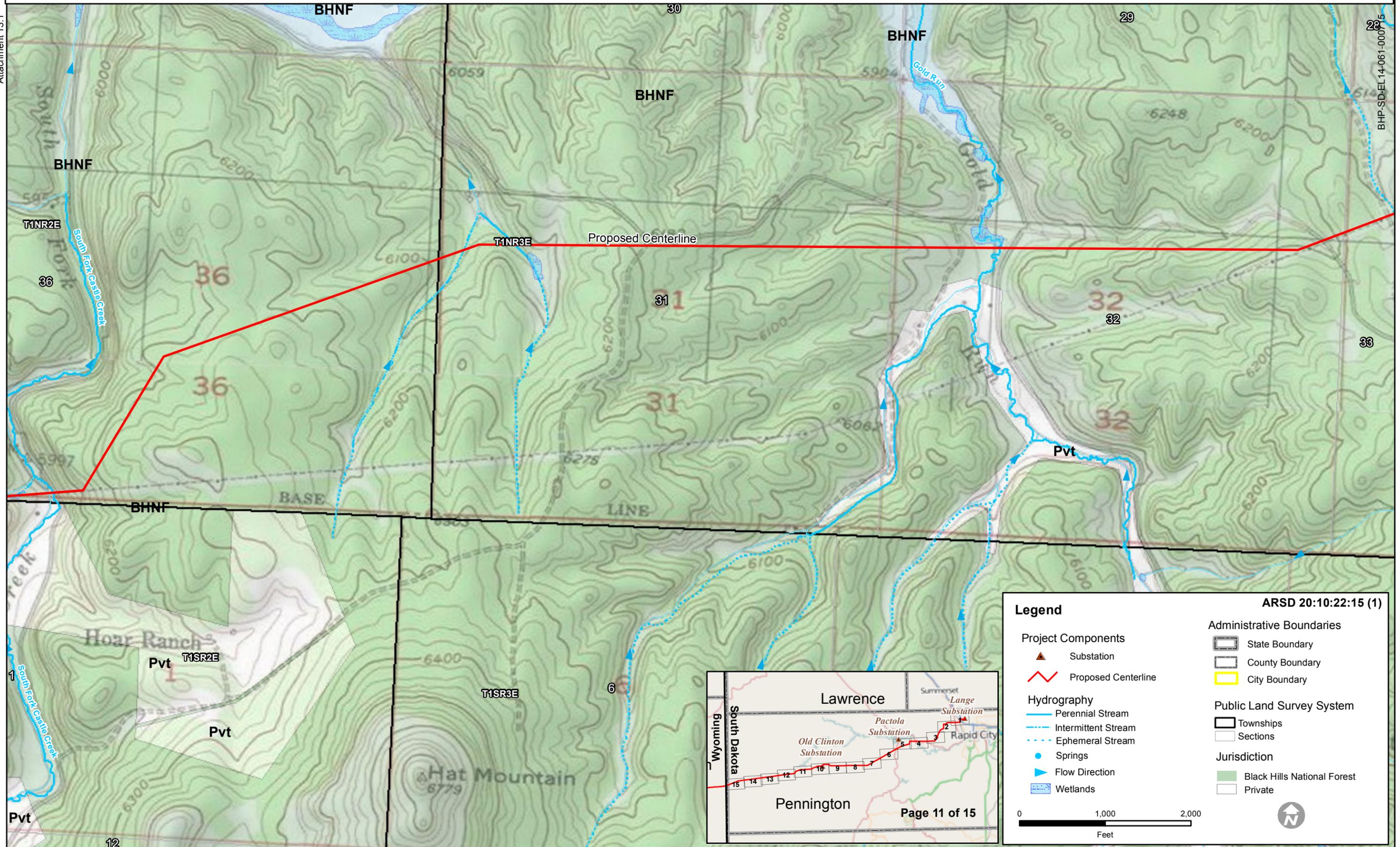
Legend ARSD 20:10:22:15 (1)

<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Hydrography</p> <ul style="list-style-type: none"> Perennial Stream Intermittent Stream Ephemeral Stream Springs Flow Direction Wetlands 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections <p>Jurisdiction</p> <ul style="list-style-type: none"> Black Hills National Forest Private
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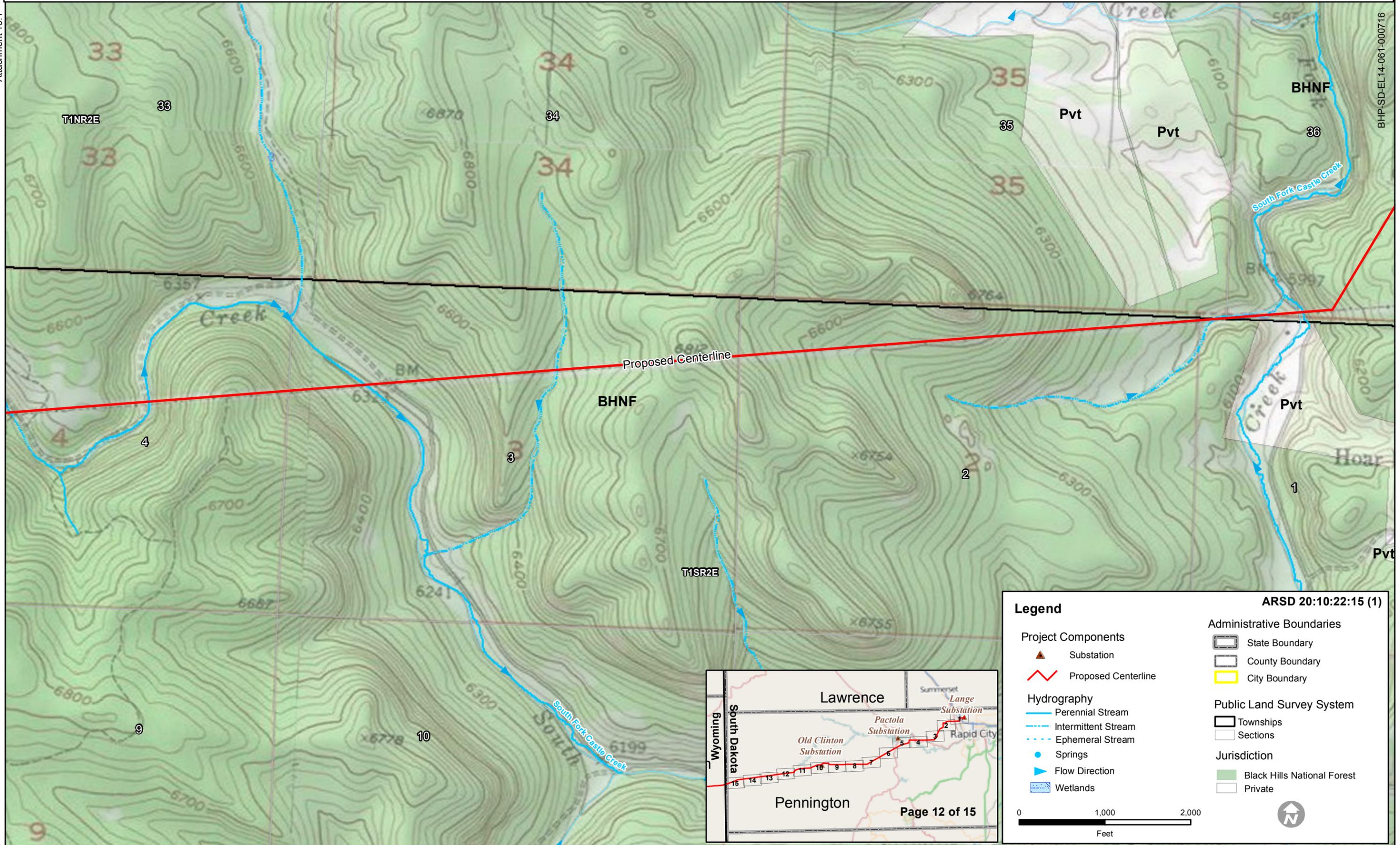


Attachment 13.1



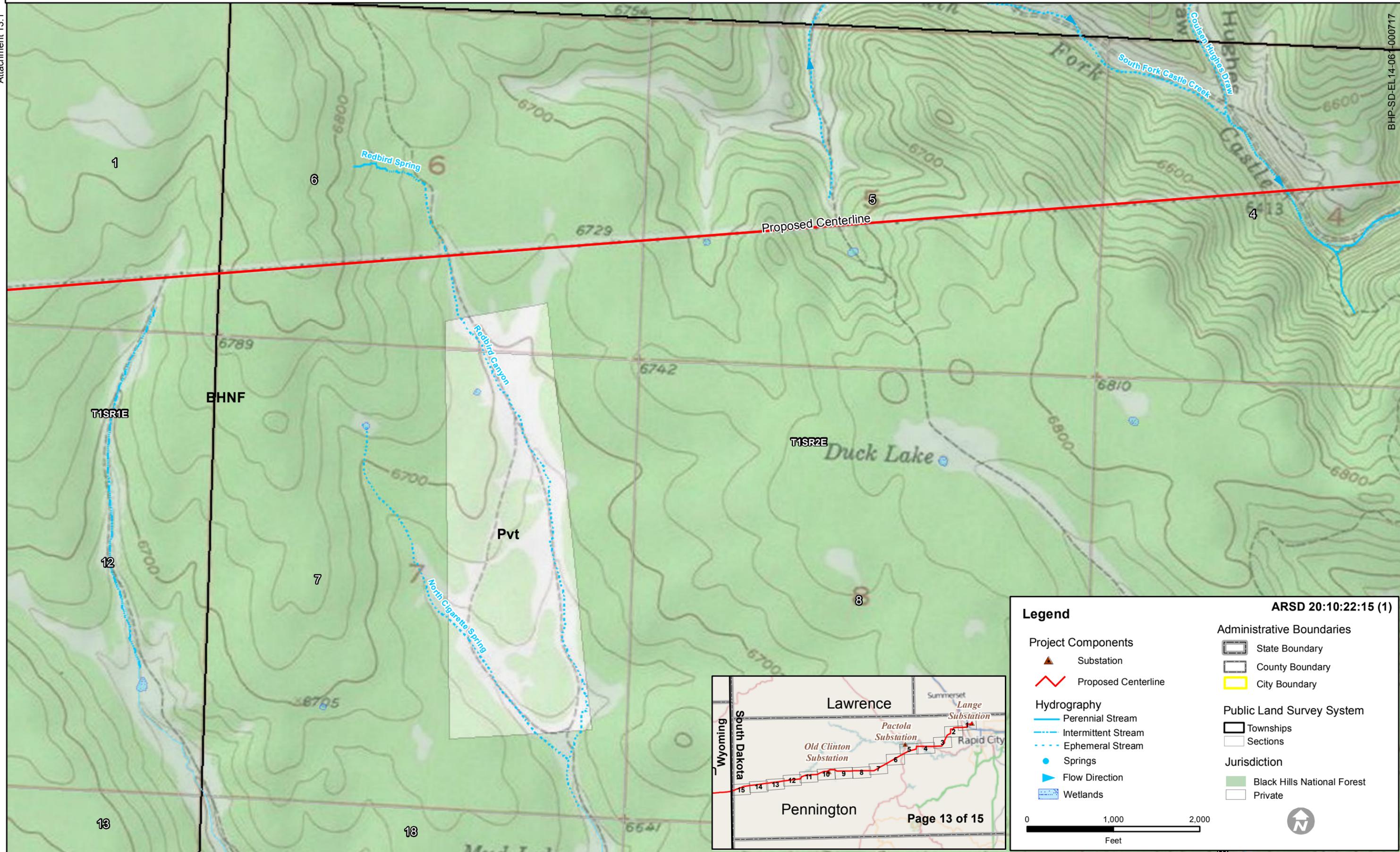
Attachment 13.1

BHP-SD-EL 14-061-000716



Attachment 13.1

BHP-SD-EL 14-061-000717



Legend

Project Components	Administrative Boundaries
▲ Substation	▭ State Boundary
— Proposed Centerline	▭ County Boundary
Hydrography	▭ City Boundary
— Perennial Stream	Public Land Survey System
- - - Intermittent Stream	▭ Townships
⋯ Ephemeral Stream	▭ Sections
● Springs	Jurisdiction
▶ Flow Direction	▭ Black Hills National Forest
▭ Wetlands	▭ Private

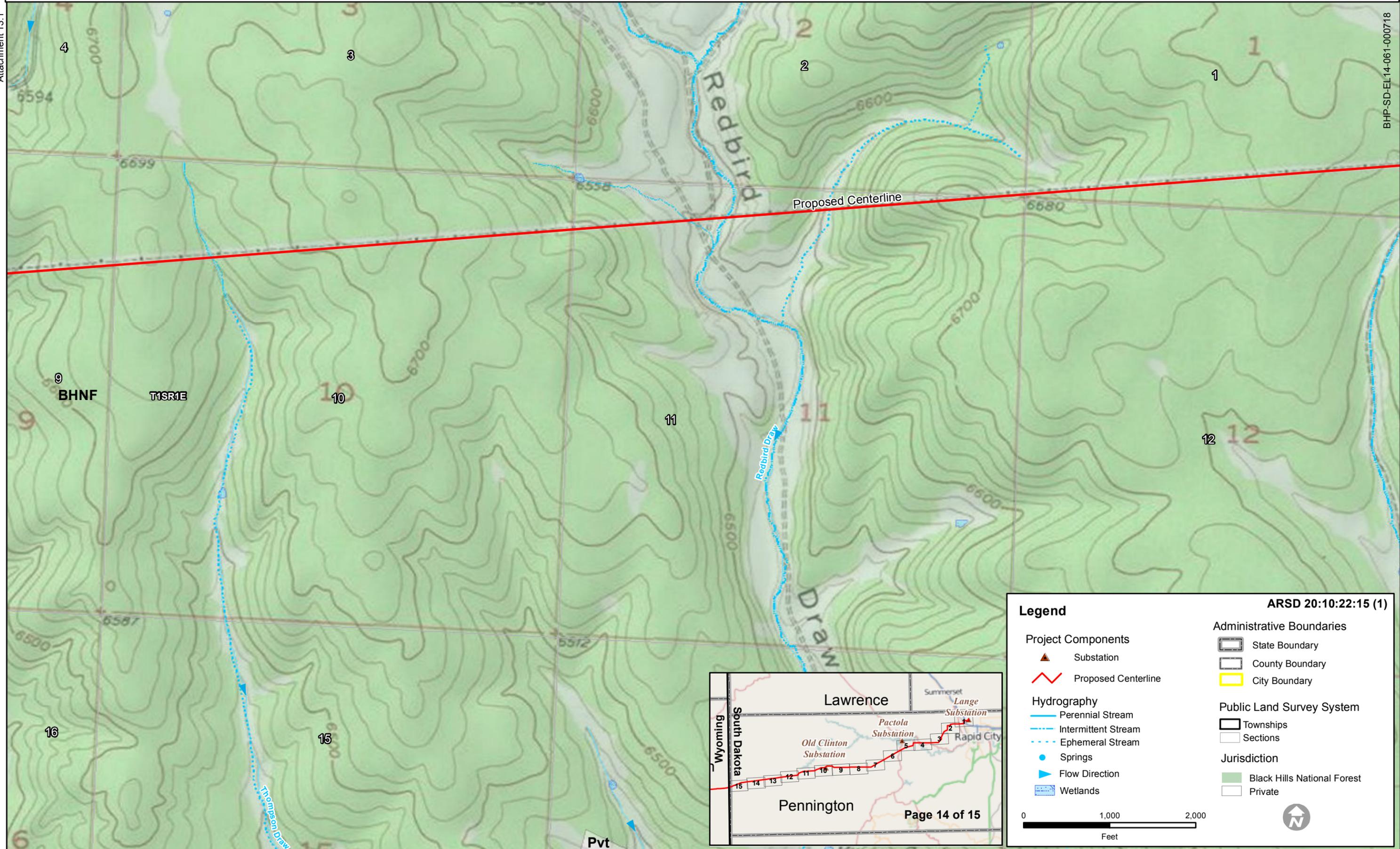
ARSD 20:10:22:15 (1)

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Page 13 of 15

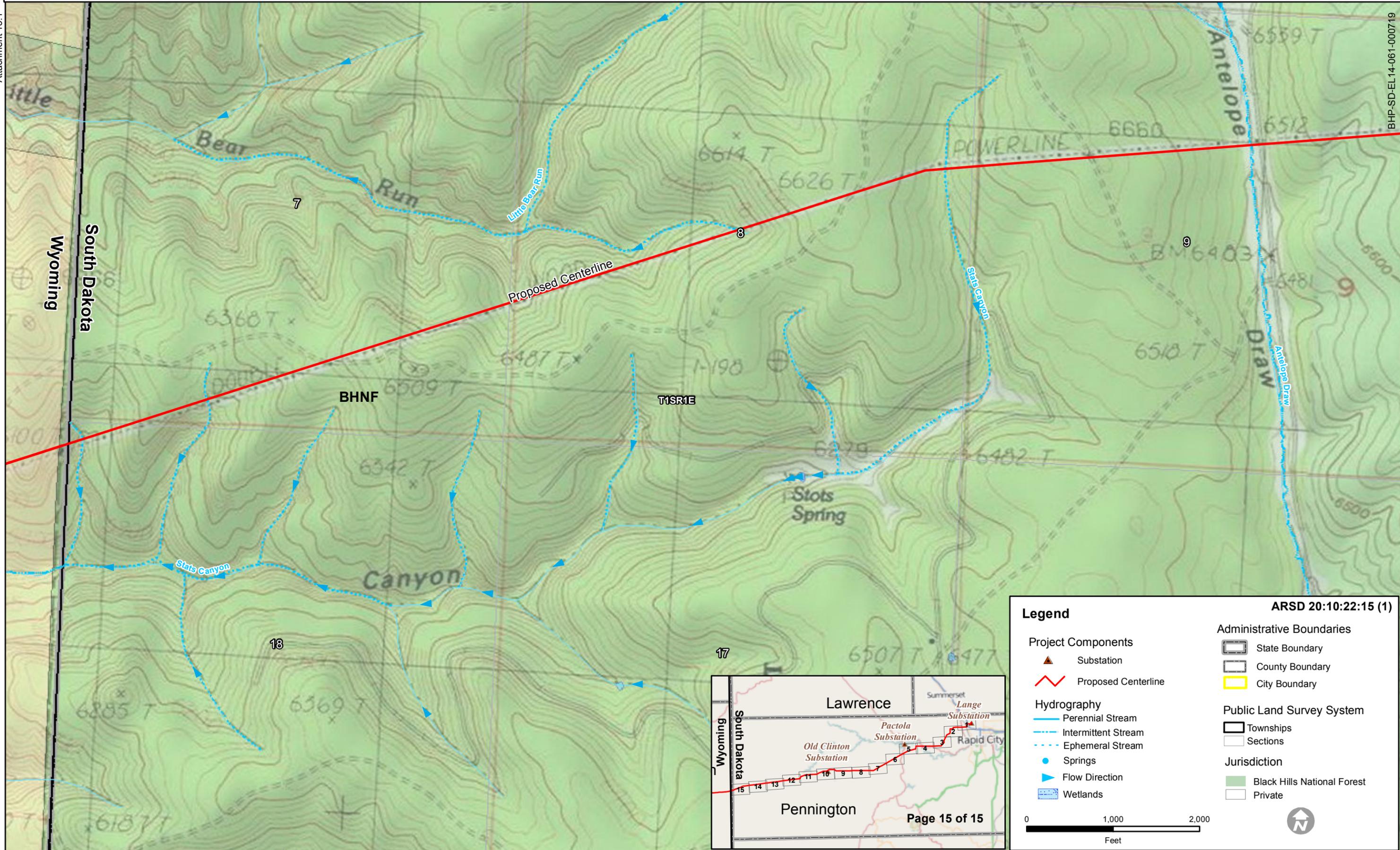
Attachment 13.1

BHP-SD-EL 14-061-000718



Attachment 13.1

BHP-SD-EL 14-061-0007.19

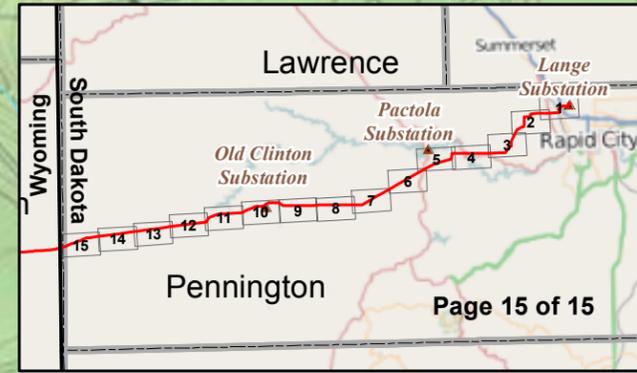


Legend

<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Hydrography</p> <ul style="list-style-type: none"> Perennial Stream Intermittent Stream Ephemeral Stream Springs Flow Direction Wetlands 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections <p>Jurisdiction</p> <ul style="list-style-type: none"> Black Hills National Forest Private
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BLACK HILLS POWER, INC.
SD PUC DOCKET: EL14-061

REQUEST DATE : August 21, 2014

RESPONSE DATE : October 3, 2014

REQUESTING PARTY: SDPUC Staff

SDPUC Request No. 17:

On page 21 of the application, the Applicant discusses potential impacts to recreational residences on public land. Please provide a map, with similar resolution provided in *Q5*, identifying those residences.

Response to SDPUC Request No. 17:

One of the early alternatives came close to several recreational residences on the Black Hills National Forest. That route is no longer under consideration.

Please see Attachment 17 for the recreational residences near the current proposed route. On page 2, section 11, there is one recreational residence approximately one half mile from the proposed route. On page 1, section 5, there are other recreational residences approximately one quarter mile from the proposed route. These residences will not be impacted by the proposed route.

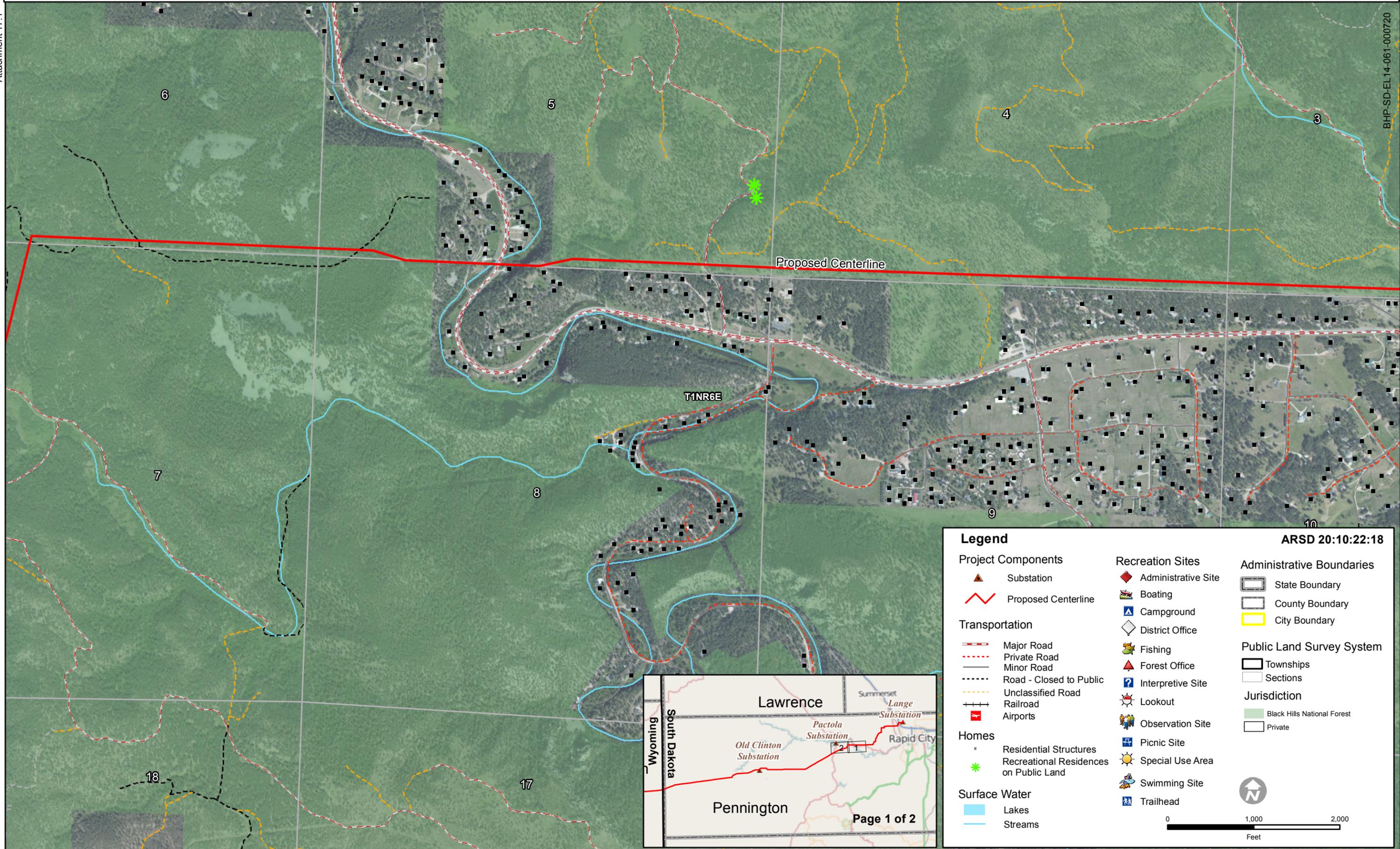
Supplemental Response to SDPUC Request No. 17:

Black Hills Power revised Attachment 17 to reflect the final route. Please see Attachment 17.1.

Attachments: Attachment 17.1 – Revised Recreational Residences

Attachment 17.1

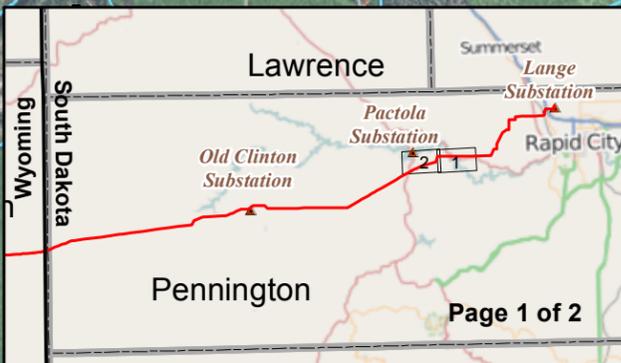
BHP-SD-EL 14-061-000720



ARSD 20:10:22:18

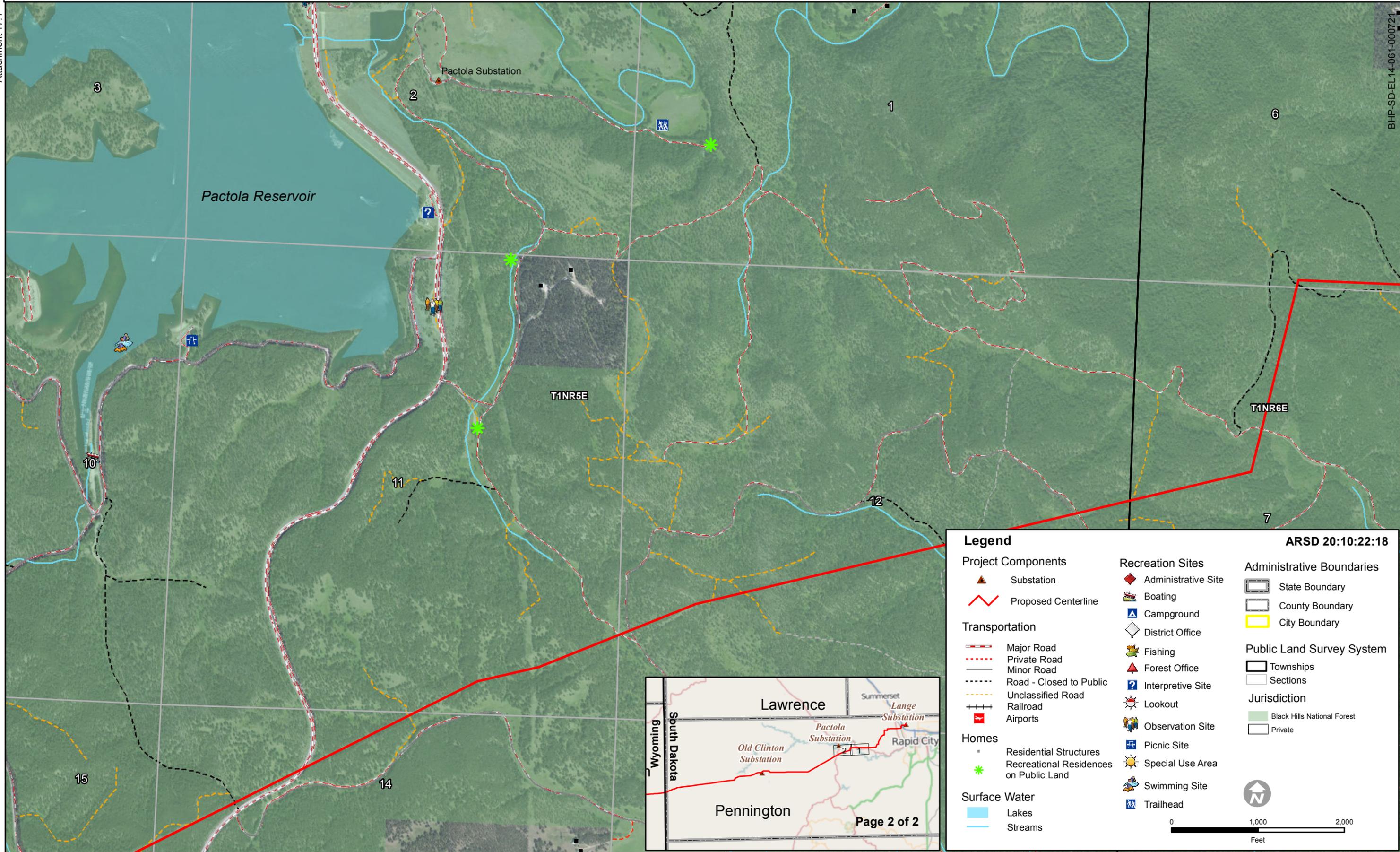
<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Transportation</p> <ul style="list-style-type: none"> Major Road Private Road Minor Road Road - Closed to Public Unclassified Road Railroad Airports <p>Homes</p> <ul style="list-style-type: none"> Residential Structures Recreational Residences on Public Land <p>Surface Water</p> <ul style="list-style-type: none"> Lakes Streams 	<p>Recreation Sites</p> <ul style="list-style-type: none"> Administrative Site Boating Campground District Office Fishing Forest Office Interpretive Site Lookout Observation Site Picnic Site Special Use Area Swimming Site Trailhead 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections <p>Jurisdiction</p> <ul style="list-style-type: none"> Black Hills National Forest Private
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Attachment 17.1

BHP-SD-EL 14-061-000721



Legend ARSD 20:10:22:18

<p>Project Components</p> <ul style="list-style-type: none"> Substation Proposed Centerline <p>Transportation</p> <ul style="list-style-type: none"> Major Road Private Road Minor Road Road - Closed to Public Unclassified Road Railroad Airports <p>Homes</p> <ul style="list-style-type: none"> Residential Structures Recreational Residences on Public Land <p>Surface Water</p> <ul style="list-style-type: none"> Lakes Streams 	<p>Recreation Sites</p> <ul style="list-style-type: none"> Administrative Site Boating Campground District Office Fishing Forest Office Interpretive Site Lookout Observation Site Picnic Site Special Use Area Swimming Site Trailhead 	<p>Administrative Boundaries</p> <ul style="list-style-type: none"> State Boundary County Boundary City Boundary <p>Public Land Survey System</p> <ul style="list-style-type: none"> Townships Sections <p>Jurisdiction</p> <ul style="list-style-type: none"> Black Hills National Forest Private
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